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ABSTRACT

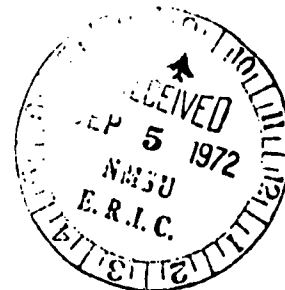
The Campinas region of Brazil was studied to determine if the introduction of industrial plants in rural areas influenced the life of the rural population. The purpose of this study was to obtain an insight into the manner by which the industrialization influence is functioning in the Campinas rural area. The region and its rural population were described in terms of the following topics: the level of social contacts, mass communication, educational aspirations, agricultural development, home appliances, sanitation level, pollution in the surroundings, the rural middle class, and change in the rural worker's social values. Major conclusions were that industrialization tends to increase social contacts, that the presence of means of communication denotes a higher level of industrialization impact on the traditional rural society, that exposure to industrialization creates changes in the class structure and in housing, and that the arguments surveyed were not sufficient to show change of the rural man's social values under the impact of industrialization. (PS)

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Louisiana State University in Baton Rouge ( USA )



INFLUENCE OF INDUSTRIALIZATION IN THE CAMPINAS RURAL REGION

by

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1972

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RURAL REGION (\*)

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1. INTRODUCTION

Brazil's State of São Paulo is considered as the most industrialised, however it would be a fallacy to consider that all counties comprised in this state will be equally submitted to the same industrial effects, regardless of having or not having industrial plants. Many of S. Paulo's counties are far from that influence, as in the case of Bofete (1), Corumbataí, Morungaba, to mention just a few. As a matter of fact, the center of industrialisation was exclusive of the S. Paulo metropolis, but due to a series of ecological, social, political and economical factors, the process of moving industries into the interior began to become a reality, thus creating at least three industrialisation centers: 1) the ABC, made up of Santo André, São Bernardo and São Caetano, which at first were S. Paulo satellite cities, until approximately the year 1960. With the growth of S. Paulo's urban center (greater São Paulo) they were incorporated to the metropolis, to the extent that the rural population is unimportant (Santo André's population of 420,828 are distributed unevenly showing the urban population as being 419,272 and that of the rural area as being 1,555: São Bernardo's population comprises 202,505, with 189,913 for the city and 12,592 for the rural area and São Caetano which boasts 151,012 people entirely confined to the city, without any rural area and deprived of any possibility for territorial expansion; the 2nd. sub-center is the Paraíba Valley, with São José dos Campos standing out as most important (with 150,000 people, the city sharing 134,896 of its population and 15,988 living in the rural area) respectively as the axis of a wider micro-region and 3rd) the Campinas region's sub-industrialisation pole, located in its peripheric depression, an area of early settlement, whose dominating center is Campinas, with great importance in the industrial development process. The group of counties that make up the Campinas region is characteristic, due to possessing contrasting features with regards to its number of rural and urban population, as will be seen further along. But what calls attention is that

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(\*) This survey is part of the 1971-ATFX3-IPPACC Project consolidated for training students of Social Sciences at Campinas' Catholic University. The method used was framed through a randomic polietapical sampling and use was made of aerophotogrametric surveys for limiting the universe. In securing the sample they considered a 95,5% acceptance limit with 3 standard deviations being the sample coverage 496, with an approximate 5% margin of error. The most used techniques for securing information were planned interviews, form filling and systematic observation.

this region shows a visible parting from the traditional habit of locating industries in the urban area, by placing them in the rural regions. On the other hand the question rises, In which has the setting of industrial plants in Campinas' rural areas caused influence in the rural population's life? In which way does this influence affect the social structure and the system of social and cultural values? Were such influences felt evenly or did they have local variations by occupational sectors of the active rural population? In short, what should stand out are the independent and intervenient variables which are more significantly responsible for locating industry in the rural environment and for its effect in transforming the peasants. To measure this kind of valuation is much more problematic than simply analysing the cause and effect or product-producer relations of motivational variables in transforming rural society. The argument in this case is to know the marked consequences of industrialisation in the rural environment, by emphasizing not only its influences but, above all, stressing that such influences will meet intervenient variables to accelerate, motivate or transform these influences into speedy trends of social change, paralyzation or weakening. These intervenient variables stand out as they are placed as indicating variables of a supposed analysis scale, for which was necessary to consider some basic hypothesis.

## 2. BASIC HYPOTHESIS

To obtain a clear, differential insight into the manner by which the industrialisation influence is functioning in the Campinas rural area, it is necessary to conceive basic hypothesis. Many of these hypothesis appear to be implicit in the works of Wilkening (1) and Trujillo Ferrari (2). Such prepositions are:

1) Industrialisation in the rural environment or its influence tend to increase the rural people's secondary social contacts considerably.

2) The secondary social contacts are more evident in the social or professional strata which are under direct influence of the industrialisation than in those that are added to the region.

3) When the peasant is provided with a mass means of communication one can diagnose that the traditional rural society has undergone an opening to the effects of the industrialisation process.

4) The rural population reached by T.V. programs tend to receive the spreading of new ideas, habits, techniques, etc, in identical proportions to the industrialised urban regions, but assimilation is a result of the structural differences prevailing in the country.

5) As industrialisation influence increases, so does the parents' educational concern as regards their children.

6) The groups that are constantly in contact with industrial activities have a higher educational level than those who are just being reached.

7) Innovation in production's traditional processes and in the use of the soil by means of systematic cultures, through the application of crop protection, mechanical implements, seed selection, soil analysis, technical consultation, etc are evidence of the advanced stage of influence from the industrialisation process.

8) Under the effects of industrialisation in the rural environment there is an increase in the division of population work, toward industrial activities, and the same happening to specialisation.

9) The incorporation of specialised and professional works in the rural area, becomes a means of social-cultural changes and structural mutations.

10) The specialisation of the farmer himself in agricultural tasks is a reflex of the transformation stage of eminently farming societies under the need of industrial requirements.

11) When the migration of the rural population to work in the factories is noticeable, one can say that its effects are quite evident, thus producing new life expectations.

12) The physical presence of some factories in the rural areas does not necessarily mean a change in the country folks' life, when they are totally segregated from the tasks required by industrial living.

13) Besides the electrical appliances being an indication of the social economical status of the rural population, it is also an objective indication for measuring the degree of influence caused by industrialisation.

14) Under the influence of industrialisation in the rural area, there is a visible improvement in the sanitation levels of country folks society.

15) An objective indication of industrial influence in terms of harmful results is when peasants who belong to different occupational and social groups become aware of pollution.

16) Industrialisation causes great structural changes in the rural society people.

17) The appearance of a middle class in the rural area proves that the industrialisation influence has taken such strides to the extent of having affected class impenetrability, thus favoring a greater social mobility.

18) The peasant's awareness about benefits and restrictions which factories provide in the rural area is a symptom of the changes in the traditional social values.

### 3. CAMPINAS REGION AND ITS RURAL POPULATION

Although the Campinas region does not display a carefully precise boundary, encompassing homogeneous social-economical, cultural and ecological elements, it can be considered in connection with the influence and spreading out of the industrial growth having the terciary activities as a focus of diffusion

and centralisation in Campinas City and other county seats. This region comprises 23 counties, encompassing 7,803 square kilometers, in which there live..... 1,062,291 people. The geographic countryside is featured mainly by its peripheral depression, and it is an old settling zone. The main pillars in strengthening the occupation and exploitation of the rural area were represented by the Mogiana Railway Company meant for hauling export coffee in 1845 and the Paulista Railway Company, founded in 1872 aiming at the same goal. More recently the Anhanguera Highway has become the center of the region's great industrial plants, so that the flow of bus and train passengers, as well as the influence created by Campinas in the field of education, work, etc, give an idea of the region's approximate boundaries.

This region's rural population reaches 206,404 people, which means only 19,43% of the total. However, not all of the counties boast 4/5 of its population as being city dwellers, or living in the urban areas. There are counties, such as Arthur Nogueira, where 68,70% of its population live in the country, and the same applies to Jaguariúna (62,93%), Paulínia (66,02%), Monte Mor (2,30%) and Elias Fausto (52,21%). On the contrary, the counties which show a smaller percentage of rural population are Campinas (10,59%), Limeira (15,21%), Piracicaba (16,04%) and Pedreira (19,71%).

In the region, the rural population shows a greater number of males (52,68%), whereas females reach the 47,32% mark. This is explained by the fact that rural females seek the city to be hired as house maids or textile factory workers, as in the case of Americana county. In this county's rural area there are 1,901 women for 2,091 men, that is 47,62% of the weaker sex tend to remain in the rural area. This percentage is constant in nearly all counties, only falling in Indaiatuba to 46,10%. It could be said that percentually this county undergoes a relatively small loss of its female population which migrates to the county's urban areas or to other cities of the region.

The rural workers of this region do not make up antropogeographic types as in other areas of Brazil, but social-economically they can be characterized into seven prominence groups: 1) that of the "small farmers", 2) "farmers", 3) "orchard caretakers", 4) "farm hands", 5) "cropsharers" and leasers, 6) "administrators and farm managers" and 7) the workers dedicated to rural tasks but who are not associated to the category of hand laborers. This classification can be synthesized in two large general groups: that of the "landowners" (farmers, small farmers, orchard caretakers) and that of "non owners" (made up by the other group).



TABLE Nº 1

## CAMPINAS REGION POPULATION DISTRIBUTED IN AREAS, 1970 \*

Counties	Urban number %	Suburban number %	Rural freq. %	Total
1. Americana	62.666 94,11		3.999 5,99	66.665
2. Araras	41.119 76,47		12.655 23,53	53.774
3. Arthur Nogueira	3.200 31,30		7.025 68,70	10.225
4. Campinas	341.617 89,41		40.480 10,59	382.097
5. Conchal	4.484 56,05		3.371 42,91	7.855
6. Cordeiropolis	3.836 47,90	652 8,14	3.520 43,95	8.008
7. Cosmópolis	7.038 57,94		5.110 42,06	12.148
8. Elias Fausto	2.445 39,68	499 8,10	3.217 52,21	6.161
9. Indaiatuba	22.436 73,18		8.223 26,82	30.659
10. Jaguariúna	3.864 37,07		6.562 62,93	10.426
11. Limeira	63.742 69,65	13.854 15,14	13.919 15,21	91.515
12. Mogi Guaçu	30.337 70,55		12.666 29,45	43.003
13. Mogi Mirim	28.660 78,28		7.955 21,72	36.615
14. Monte Mor	3.777 47,52	14 0,18	4.157 52,30	7.948
15. Nova Odessa	6.277 74,86		2.109 25,14	8.386
16. Paulínia	3.682 33,98		7.154 66,02	10.836
17. Pedreira	12.142 80,29		2.981 19,71	15.123
18. Piracicabá	130.004 83,96		24.851 16,04	154.855
19. Stº Antonio da Posse	4.200 52,86		3.746 47,14	7.946
20. Sta Bárbara D'Oeste	22.466 72,07		8.707 27,93	31.173
21. Sumaré	15.444 65,41		8.167 34,59	23.611
22. Valinhos	19.944 64,62		10.920 35,38	30.864
23. Vinhedo	7.488 60,40		4.910 39,60	12.398
TOTAIS	840.868	15.019	206.404	1.062.291
%	79,15	1,4	19,43	(100,00)

\*Source: Data from Brazil's VIII General Census, 1970 (preliminary Synopsis of Demographic Census: São Paulo).

These two criteria will be employed in the process of the analysis of the industrialisation impact on the region. Inside typology, considering exclusively property criteria, in many cases, the separation between one group and another becomes spread. For the sake of explanation, the "small farmer" is the owner of land that generally covers over two alqueires (24,200 M2) up to approximately 40 alqueires. The "small farmer" generally lives in his property and exploits it him-



self along with the aid of his family; when the property is quite large he hires some farm hands. It was discovered that a large part of the "small farmers" (or "sitiantes") descend from early immigrants, particularly Italians, Russians, Americans and Portuguese. Another part of the small farmers originate from other parts of the state, who have settled in the area during the last thirty years. The cultural standards and values of the latter are surrounded by a more accented gamut of values provenient from the urban-metropolitan sub-culture (3). "Chacareiros" (Orchard caretakers) are the owners of "chácaras" (orchards, groves) less than two "alqueires" in size, many of them inclusively, practice the so called "part time farming" (4) and are linked to urban standards, and they perform, as well, bureaucratic functions in the city, changing into farmers over the weekend, more as a motivation for their idle hours or as a mental hygiene. These "fake" farmers generally have a caretaker who lives permanently in the place and who are in charge of the limited farm tasks and for which they are paid a salary, generally the minimum wage in the region. The "chacareiros" themselves, are those who exploit the land tract for a living, and they generally are dedicated to fruit growing, as usually happens at Valinhos, Vinhedo, Campinas, Sumaré, etc. It is no wonder that a five-people family, in this region, can live on the production of one alqueire of land (six acres). This has raised no few problems as farmers cannot secure land deeds because the minimum IBRA size requirement is 8 to 10 alqueires (6:p.295). Farming rationalisation, soil quality, technological improvement, thanks to industrialisation progress will cause such a situation, quite different from Bofete where farmers require at least 10 alqueires to be able to subsist. (7:p.105).

The "fazendeiro" (large farm owner) owns land generally over 40 alqueires, although a few who own smaller areas are considered as such. Sometimes the farm, as a production enterprise, may belong to one person or various partners. The farmer may live off and on in the premises, permanently or can commute from the city either daily or a few days a week. Regardless of his living on the farm his responsibilities are "financing" sketching the farm policies, and handle outside matters, as well as showing a certain "noblesse oblige" attitude (8:p.209). In spite of the marked characteristics, one can find differences among them depending on the structure and farm organisation. There are farmers who depend directly on their annual crops, on sugar cane production and who play the role of sugar mill suppliers, who, in their turn, are the ones who exploit farms in terms of an industrial enterprise, since they produce alcohol, sugar, celotex, paper and several by-products, such as Harry Hutchinson fully described (8). That kind of farm is an agroindustrial unit whose one or several owners can be Brazilians or foreigners. There are the farmers who handle the so-called permanent crops, such as orange, particularly in the Limeira area, as a main agro-industrial center which has placed Brazil as the world's second largest producer. The agricul-

tural and cattle ranches, although relatively smaller in number tend to be highly rationalized due to having a mechanised many fold crop along with a high quality dairy cattle.

TABLE Nº 2  
CAMPINAS RURAL POPULATION DIFFERENTIATED PER SEX, 1970 \*

County	Male		Female		Total Number
	Number	%	Number	%	
1. Americana	2.091	57,38	1.901	42,62	31.357
2. Araras	6.597	52,18	6.022	47,72	12.619
3. Arthur Nogueira	6.980		3.679	47,29	6.980
4. Campinas	21.042	52,32	19.176	47,68	170.478
5. Conchal	1.749	52,01	1.614	47,99	3.363
6. Cordeirópolis	1.874	55,24	1.646	46,76	3.520
7. Cosmópolis	2.603	51,01	2.496	48,95	5.099
8. Elias Fausto	1.742	54,17	1.474	45,83	3.216
9. Indaiatuba	4.417	53,90	3.779	46,10	8.196
10. Jaguariúna	3.456	52,79	3.091	47,21	6.547
11. Limeira	7.240	52,19	6.634	47,81	13.874
12. Mogi Guaçu	6.694	53,00	5.937	47,00	12.631
13. Mogi Mirim	4.166	52,37	3.760	47,43	7.920
14. Monte Mor	2.203	53,19	1.939	46,81	4.142
15. Nova Odessa	1.077	51,41	1.018	48,59	2.095
16. Paulínia	3.982	55,81	3.153	44,19	1.653
17. Pedreira	1.566	52,61	1.411	47,39	2.977
18. Piracicaba	13.003	52,62	11.709	47,38	24.712
19. Stº Antonio da Posse	1.941	53,27	1.703	46,73	3.644
20. Sta Bárbara D'Oeste	4.453	51,33	4.223	48,67	8.676
21. Sumaré	4.147	51,19	3.650	48,81	7.797
22. Valinhos	5.707	52,69	5.125	47,31	9.834
23. Vinhedo	2.621	53,40	2.288	46,60	3.702
TOTALS	108.050	52,68	97.050	47,32	205.100(100%)**

\* Source: Brazil's VIII General Census, 1970.

\*\* The numerical difference between Table nº 1 and nº 2 of 1304 for the rural population are originated from the VIII Census itself.

A great part of the region's farmers can be considered as capitalists, entrepreneurs, specially due to their greater educational level. The exclusive one-crop

(coffee) farm, has practically disappeared from the area as a result of 1929-30 crisis and consequence of price fall in the international market during the 1960-65 period and of the coffee government policy. Any test of the farmers attitude will show that they have a wide insight into the world of business, since they are closely bound to national and international law.

Within the non-owner class, one can find the "trabalhadores braçais" (laborers), "camaradas" (farmhands), "colonos" (tenant farmer) or the "agregados" (household servant), who are mostly from other regions, or who move within the region, or come from other states, particularly from Minas Gerais and from Brazil's northeast. For some of these traveling workers, farm work is nothing but a jumping place towards achieving their goal, that is, migrating to the city; for others, to secure an income in order to return home, and still for others, to find the guaranty of a permanent living on the farm. There are "minority groups" among the laborers who have lived on the farms for over two generations, as it happens on the Fazenda das Cabras at Campinas. Most of the laborers are illiterate, or they have an incomplete elementary education, but the fact of their high spacial mobility and that of being exposed to mass communication, will allow them to assimilate industrialisation effects more easily. On the other hand, their lack of skill or qualification causes them to keep on handling the hoe and the pick required by the soil, without producing visible tensions.

"The "meieiros" (cropsharers) or "parceiros" (harvest partners) are the farmhands who exploit part of the owner's land (farmers and ranches) and share the harvest according to pre-established usual ways and which give origin to "meia" (half), "terça" (one third) or "quarta" (one fourth), depending on landowner and worker sharing the harvest. "The "meieiros" (keeping 'One half') originate from the area and have some kind of social relation to the owner of the land. This "acquaintance" can originate from friendship, family attachment, skill in production, worker's character and so on. The "meieiros" education does not differ from that of the other farmhands. For classification purposes the "leasers" were grouped in the latter, and it should be stressed that the social-economical level of such leasers is considered higher and they generally have had secondary education schooling.

The "trabalhadores rurais" (farmhands) is perhaps the most shapeless group, comprising processing laborers, and even those who perform more modest activities such as wagon drivers or the stable man. This refers to farm workers who live permanently on the premises, since they are provided with housing and eventually a small piece of land (roça) for their own use, besides other benefits such as social security assistance whenever necessary, financing help from farm owner or moral counselling. There are cases when the workers live in small villages or even in the cities, being transported to the farm on its trucks. On the other hand, there are independent poultry farmers and brick makers in

this group and they live permanently in the rural area, although the brick factory owner usually has his home in one of the neighboring towns. As the degree of mechanisation in the rural area and the industrialisation impact tends to grow, the number of different farm activities seem to increase, without mentioning the farm workers' family members and farmhands who work directly in the factories which are located amidst farms.

In the non-owner ranks, the "administrator" or "managers" of farms make up the people with the highest social-economical status in the area. The latter and their families live permanently in the work place, although they are forced to travel even to distant urban centers because of their callings. The administrators or managers are high salaried employees, and they generally have college level professions and their responsibility is to perform the farming policy adopted by the owner, regularly account for expenditures, hire and dismiss employees and to maintain the order and the authority on the farm(8:p.208). The administrator's basic role, through his subordinates and in face of the modern necessities and requirements, is to succeed in securing the productive participation and the primary integration of the workers' personalities, including that of the less experienced and of more rudimentary farming standards. The region's rural population, in a general way, is spread throughout the small settlements, rural communities or on farms, or even in "rural boroughs" (generally a group of "orchards and small farms") united by the links of friendship and relationship which accounts for the way they are called peculiarly, as in the case of the Pires Borough at Limeira and Amarais Borough at Campinas and so on. The new landscape shows the factory surrounded by workers' abodes, reminding, at first sight, of the old medieval castles surrounded by the servants' living quarters.

#### 4. LEVEL OF SOCIAL CONTACTS

To obtain an indicator which will show the influence of industrialisation on the Campinas region rural population, we stress the level of social contacts under three fundamental aspects: 1) Rural population's physical contacts; 2) Degree of family and friendship relations; 3) Contacts resulting from works (either religious, amusement, social, banking and technical).

The analysis of the rural population's physical contacts reveals to what extent they are tied to the area whose influence center is Campinas as a source (terciary pole) of radiation, at least theoretically of industrialisation. In order to test this situation it was compared with the influence exercised by S. Paulo and Rio de Janeiro's metropolises, as well as with the political influence, of Brazil's capital: Brasília. It is doubtless that Campinas city exercises a great influence on many counties' rural areas which make up the micro-region. At least 17,33% of family chiefs interviewed travel from rural area to Campinas, particularly "sitiantes" (small farmers) and "chacareiros" (orchard growers)

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where they take their produce to, and the farmers who live permanently on the farms, in order to handle matters relating to their business or profession. Those who do so once or twice a week amount to 28,42%. All the rural occupational groups are represented by a larger volume, in this area of contact with influence center. Once every fifteen days 16,53% of those interviewed visit Campinas and among them the "cropsharers" stand out. They come for supplies as well as to sell their produce or to do several activities, as we will see further. The groups who visit the city once a month come to 15,52%. It is noted that the greater concentration of contacts with the city of Campinas reach approximately 78,00% among those who travel once a month. Only 4,83% of the total have not, up to now, had any contact with this city, due to their vital needs being satisfied within the local city's area of influence which are included in the Campinas region. 10,68% do it once every 6 months whereas only 5,04% do it once a year. Sociographically, this context of rural population's physical contact is significant, when it is compared with a greater influence center represented by the Metropolis of São Paulo. It should be noted that only 1,21% travel to S. Paulo's capital every day, and specially those farmers who are associated with the region's productive life. Those who do it once or twice a week are equally farmers, a few "sitiantes" (small farmers), and farm managers or administrators reaching 6,25%: 6,04% represent those who visit it every 15 days, whereas the rural population who gets in contact with S. Paulo once a month comes up to 12,70%. Within the one-month bracket, for purposes of comparison, it is noted that the same does not reach 27,00% of the total, whereas those who go to the center of the Campinas area is 77,80%. Distance and cost effects and transportation facilities are undeniably responsible factors, but if you compare the fact, one comes to the conclusion that 36,89% of the region's rural population have never been to São Paulo. This is sufficiently self explanatory to show the independence of the Campinas region as compared to the metropolis influence. In fact, even the metropolis' domination factors on the region's hinterland are slowing down, and that is due to the fact that Campinas has experienced a greater business expansion than the state capital, the ABC and the Paraíba Valley (9:p.10). This business decentralisation phenomenon in favor of the hinterland, followed by the respective process of regional domination, is also due to the fact of embodying rural and urban areas in its region which, on their turn, make up a high power purchasing market (10:p.19).

Regardless of any discrimination, the Campinas region's rural population contacts with Rio de Janeiro is only 10,87% of the total, whereas contacts with Brasília come to an even lower 6,23%. That shows Brazil's former capital as having a still greater influence on the above mentioned rural population. To measure the degree of physical isolation it suffices to observe that 76,81% of those people have never visited Rio de Janeiro, whereas the figure rises to



82,05% for Brasília, excluding, respectively the percentages (12,70%) and..... (12,29%) of those who refused to provide any information.

TABLE Nº 3  
CONTACTS OF RURAL POPULATION WITH FOUR METROPOLIS  
OF INFLUENCE

(Numerical data in percentages, 1971 \*)

FREQUENCY	CAMPINAS	S. PAULO	R. DE JANEIRO	BRASÍLIA
Every day	17,33	1,21	0,20	0,00
Once or twice a week	28,42	6,25	0,40	0,00
Once every 15 days	16,53	6,04	0,00	0,00
Once a month	15,52	12,70	1,85	0,20
Once every six months	10,68	11,69	2,21	1,61
Once every year	5,04	19,95	6,25	3,42
Never	4,83	36,89	76,81	82,05
No information	1,61	5,04	12,29	12,70
TOTALS	100,00 (496)	100,00 (496)	100,00 (496)	100,00 (496)

\* Source: Author's survey, Project ATFX-3/71 carried out in 1971.

It is evident, in the rural society, that the family relation's imposed social contact, family relation, best man's or even friendship, has a deep meaning to permit the continuity of the social group as a microcosmic entity. Under the influence of industrialisation it seems that this structure does not tend to collapse as one normally thinks. The weakening of relations among relatives can happen when individuals of the rural population move into the cities. But, in the rural areas, notwithstanding the industrialisation effects, these relations tend to remain permanent. Figure number 4 is significant enough to prove this fact, however: to emphasize the effects of industrialisation, one should examine the demands of new relationships and contacts which force the utilisation of once exclusively urban works in order to face the expenses resulting from the industrial society's standards.

Considering the circle of family life and relationship, it can be noticed that 41,11% of the surveyed rural population visit their parents at least once a month; 12,29% do it every day, mainly the small farmers, big farmers and orchard growers; 10,68% visit them once or twice a week; 8,67% do it every 15 days and 9,47% once a month. Those who keep in touch with their parents once every six month and once every year amount to 7,86% and 6,85% respectively. Those who

do not visit their parents, 26,21%, explain that it is due to their living in the country's farthest states or even in distant countries of Europe and Asia. Emphasis is placed in a significant number of small farmers, landless workers, orchard growers, administrators, and some farm managers. A similar situation occurs in the relationship with other relatives, sisters, uncles, brothers-in-law, nephews, etc. Along this line, the margin of monthly social contacts rise to 53,22% as compared with the previous situation. On the contrary, those who do not maintain any social relation with their relatives fall to 13,10% of the total, due to the fact that when parents are far away, the other family members provide the continuation of such relationships. This is evident because only those who informed to be isolated from any contact with their relatives corresponded with the workers group generally native of Minas Gerais or Bahia. A similar situation occurs to the ones who perform several activities subordinated to the farm environment.

**TABLE Nº 4**  
**FARM PEOPLE'S FAMILY RELATIONS AND FRIENDSHIPS IN**  
**THE CAMPINAS REGION**  
 (Numerical data in percentages), 1971\*

FREQUENCY	Visit to Parents	Visit to other Relatives	Visit to best men	Visit to friends
Every day	12,29	4,23	4,83	7,05
Once or twice a week	10,68	16,13	7,46	19,96
Once every 15 days	8,67	16,13	10,68	16,93
Once a month	9,47	16,73	13,71	12,50
Once every six months	7,86	12,50	8,46	12,09
Once a year	6,85	9,88	7,66	6,45
Never	26,25	13,10	29,03	16,13
Once in a while	3,22	0,60	0,00	0,60
No information	14,71	10,68	18,14	8,26
TOTALS	100,00 (496)	100,00 (496)	100,00 (496)	100,00 (496)

\* Source: Authors's survey; Project ATFX.3/71.

The rural population's social relationship is more evident when it refers to friends, 46,44% keep some direct interstimulation. This is frequent in various occupational groups. The least exposed to the influence of ties of friendship are the laborers, administrators and farm managers and the ones who perform the most varied rural activities. The very nature of the administration



and management works isolates them from any friendship dealings, when the farms become an integral part of the enterprise system under the influence of industrialisation, unleashing, in this manner, enough motivation for secondary social contacts.

The God-father philosophy as a sentimentally-based social institution, of Latin origin, has its experience and functionality in the above study area. The god-father relationship is evident within at least once a month, and that amounts to 35,68% of the total, and this relationship is widely described in figure number 4. Approximately 16,12% entertain a certain contact with their god-fathers once every six month or once every year. However, 29,03% admitted not having any contacts, due to not having god-fathers, or because of being too far away from them. On the other side, the weakening that this institution is undergoing is symptomatic, in spite of the restrengthening process undertaken by the Catholic Church. There is an impression that industrialisation permits certain independence of people instead of their remaining tied to possible safety bonds, at least theoretically, for which such an institution contributes.

To go to church at least once a week is a must in the catholic Church, and in all indications it is faithfully observed, since 36,89% do so. There are some people from the different occupational groups with the exception of laborers and those who perform several rural activities who attend church every day even if there is no service at all. This minority group comes to 2,21%. In a polarizing situation those who have never attended church reached 13,91%. A minority (0,20%) attends church occasionally. One cannot think and least of all, admit that industrialisation leads to a decrease of social contacts with church. There is nothing, in this region, in support of such an opinion. On the contrary, church attendance has been strengthened by motor vehicles, a result of the growing Brazilian automotive industry. Hence, many of the region's churches are beginning to think of the parking serious problems, which is included in their planning for new chapel construction.

Modern Recreational life is, in a certain way, associated with an industrial exploration's mass consumption, as in the case of movies. For such reason, we tried to detect the percentage of rural population among movie goers. It was found out that 59,07% of the population does not attend movies, and among those who do so, only 0,80% go everyday, once or twice a week 5,84%, 4,63% once every fifteen days, and 5,24% once a month. 5,84% every six months and 7,05% once a year. Consequently, contact with movies is a still poor indicator in the line of attendance in order to establish a channel of influence. It is clear that this occurrence is not because of rural population's lack of interest, but as a result of an evident substitution as a result of television's marked influence, as we will see further along this work.

The social contacts that impose people's health are, in a way, a significant indicator for measuring the influence of industrial life. It is a known

fact that a great part of the rural population does not have medical services or assistance for public health. In such a way that the contact that the rural dweller has with physician and dentist shows, to a great extent, the great doses of urbanity and industrialism of the rural settler, mainly when the farm worker, as a client, has to pay for medical and dentist appointments. We found out, in the area, that 70,38% have already consulted a physician and that from total population, at least 28,42% consult a physicians once a year, whereas 19,35% do it once every six months and 10,08% each month. The number of people that have to visit the physician every other week, week v or daily is even more reduced. Only.. 21,37% did not go to the physician, considering it was unnecessary, due to having "good health", and this is evident among those who perform the most varied rural activities. About 7,46% did not provide any information.

Dental treatment among Campinas rural population is doubtlessly advancing and will change into a necessity as a result of its stage of industrialisation, although 27,41% stated never having been to a dentist, as usually happens among "sitiantes" (small farmers), rural workers and mainly with the group that perform the most different activities. The majority, 59,46% have already had periodic consultations, and it can be noticed that only 7,46% avoided supplying any information.

Contacts with bank organisations can be considered as another point of reference in order to emphasize the degree of industrial influence in the rural area; 70,91% of the rural people has the habit of going to banks. This table is significant because it evidently indicates secondary contacts which take place mainly in industrialised cities. Only 23,58% have never had any contact with a bank institution. This can be explained if one considers the social origin, because it deals mainly with laborers provenient from other states, or even with those who perform rural tasks which do not allow any contact possibility with such institution, due to the very nature of the work they perform and the level of payment which does not lead to bank saving. Farmers, small farmers, orchard growers, etc, on the contrary, by reasons of their activity, have a direct contact with bank institutions.

In the State of São Paulo and particularly in the City of Campinas, the Agronomical Institute is considered a prized organisation and it enjoys international prestige. For such a reason it was considered as a point of reference within the secondary contacts to justify industrialisation's influence, considering that expectations are focused on a more rational farming in face of industry's competitive process. The rural population that has not had contact with the Agronomical Institute amounts to 53,63%, and this could lead one to think that its influence in the area is relatively weak, but it should be pointed out that 15,12% of the rural population interviewed was made up of landless peasants, who have apparently no incentives for looking up the Institute, and to this, one can

add 8,06% of workers covering the most different activities who have not equally approached the Institute. But an exception can be added, small farmers and orchard growers who have not looked up the Agronomical Institute are generally the ones dedicated to fruit growing (figs and grapes) of the Valinhos and Vinhedo area.

TABLE Nº 5  
FARM PEOPLE'S CONTACTS REGARDING INSTITUTIONAL WORKS  
(Numerical data in percentages), 1971 \*

Frequency	Goes to Church	Goes to Movies	Consults physician	Consults dentist	Visits banks	Acquainted with Agronomical Institute
Every day	2,21	0,80	0,60	0,00	7,05	0,40
Once or twice a week	36,89	5,84	1,41	1,21	20,96	1,41
Once every 15 days	14,92	4,63	3,02	1,81	12,50	3,83
Once a month	16,73	5,24	10,08	3,83	20,56	5,44
Once every 6 months	5,04	5,84	19,35	22,98	4,83	7,86
Once a year	4,83	7,05	28,42	29,43	2,01	12,29
Never	13,91	59,07	21,37	27,41	23,58	53,63
When needs	0,20	0,00	8,26	5,84	0,80	0,20
No information	5,24	11,49	7,46	7,46	7,66	14,91
TOTALS	100,00 (496)	100,00 (496)	100,00 (496)	100,00 (496)	100,00 (496)	100,00 (496)

\* Source:- Author's survey: Project ATRX-3/71.

Considering the total volume of the region's rural population, 31,23% maintain direct contact with the Agronomical Institute. This percentage of farm workers indicates a high degree of concern in order to orient their rural activities rationally. In fact, even landless farmers approach it to secure counsel and orientation, despite the fact that the Institute's basic function is research and not exactly agricultural extension; however, the role of the Agronomical Institute is not clearly understood by a few rural groups.

#### 5. MASS COMMUNICATION AND SOCIAL CONTACTS

The hypothesis:- When the peasant society owns mass communication means it indicates the high index of impact that the traditional rural population has undergone under the influence of industrialisation. The means of mass communication media tend to prepare the field for the making of a mass society or consumption society at which the industrial production is aimed towards market expansion. In the Campinas region 52,01% receive news through television, whereas ...

34,27% obtain it only through the radio and a mere 8,46% gather their information by means of newspapers. Consequently nearly 95% of the rural population is under the influence of mass communication. Even the landless occupational group of workers are tied to this influence, notwithstanding many of them being dependent upon the traditional neighbors word of mouth information (2,21%). Regretably, the rural population, by means of mass information, which should be influenced by programs aimed at canalizing this productive force, is forced to watch irreverent programs such as the ones presented by Chacrinha, Silvio Santos and Flavio Cavalcanti which are nothing but sensationalism. The rural audience as a consequence receives the influence towards breaking isolation and industrialisation in an indirect and not systematic way tends to make itself felt only by means of commercials, which in its turn tends to develop its own necessities of industrial production in a consumption society.

**TABLE Nº 6**  
**CHANNELS OF COMMUNICATION WHEREBY RURAL POPULATION**  
**OBTAINS INFORMATION, 1971\***

Channel	Small farmers	Farmers	Orchard Growers	Rural Laborers	Leasers and cro psharers	Adminis- trators & Managers	Other rural workers	TOTAL
T. V.	63,27	58,00	22,66	54,28	65,38	40,62	37,50	52,0
Radio	27,11	8,00	65,33	32,85	19,23	53,12	47,75	34,27
Newspaper	5,65	30,00	1,33	10,00	15,38	0,00	7,50	8,46
Books	0,00	2,00	0,00	0,00	0,00	0,00	0,00	0,20
Neighbors	0,56	0,00	8,00	0,00	1,00	6,25	2,50	2,21
Experts	3,38	2,00	1,33	1,42	1,90	0,00	2,50	2,01
No information does not receive information	0,00	0,00	1,33	1,42	0,00	0,00	2,50	0,80
TOTALS	100,00 (177)	100,00 (50)	100,00 (75)	100,00 (70)	100,00 (52)	100,00 (32)	100,00 (40)	100,00 (496)

\* Source:- Author's survey: Project ATEX-3/71.

The constructive role played by government experts toward spreading the knowledge and the achievements of modern agricultural and scientific successes, make up only 2,01% of the total. This table is quite significant, not because of the number, but due to multiplication of the government experts' social roles because, besides spreading new scientific knowledge among the rural population they are also considered as broadcasters of news and information. The voluntary associations are important mechanisms to increase the population's specialized interests, as stressed by Lundberg, but many of the interests can be satisfied in secondary interactions ,

particularly those that do not imply associativisms (11). As the urban-industrial societies expand, there appear a larger number of voluntary associations as a process of recomposition of people's social life. In the rural area, social life runs inside the family, relatives, neighboring groups and the community. In the Campinas rural area, notwithstanding industrialisation effects, it looks as though traditional institutions resist the converging effects of modernisation and industrialisation, because only 17% of family chiefs belong to sport clubs; 19% to religious organisations; 16% to cooperatives; 15% to unions, and 23% to class associations, which represents approximately an 18% average of the rural population that is tied to some voluntary organisation. Cooperatives and class associations are mainly, and in a certain way, instruments to industrialisation influence, since it indirectly imposes a certain concern over renewal of production techniques so that members can secure a higher level of salaries.

#### 6. LEVEL AND EDUCATIONAL ASPIRATIONS

Notwithstanding education as a social system being apparently independent of the industrialisation process, the latter changes, at last, into an infrastructure or as a consequence of same. A community educational system, or that of a region which covers many communities, boroughs, farms, small farms, and villages, like that of Campinas, can be considered in principle, as increase in the municipal administrative-political systems of a primary level; of a secondary level as theoretically dependent on the state power, and the same happening to the superior or university (college) level. In the Campinas region, both in the rural or urban area it is worthy noticing that the federal power is practically not felt, because São Carlos' Federal University practically escapes this region's territorial domination.

Education as a social system although depending on the meeting of the three political-administrative bodies, tends to manifest a certain kind of neutrality in regards to manifest or ostentatious characteristics of the powers influence which warrant continuity of teaching, and making use of taxpayers for such. As Miller and Torm (12:p.860) manifest this neutrality is not separated from a higher political interference due to the fact that the different groups associate different values to the educational system.

In the rural area where communities are underdeveloped, the occupational level is generally low, since educational institutions and particularly the rural school plays an almost passive role (13:p.57). In the Campinas rural area, which is exposed to industrialisation influence and consequently to modernisation, the population has higher educational levels than one would expect emphasizing that the school's formal socialisation process is felt more on those who have land, than on those who do not, and this is understandable for they are from other areas of São Paulo State and Brazil, where school's demands are



transferred to other activities, like when school children give up studies at harvest time

TABLE Nº 7  
EDUCATIONAL LEVEL OF SAMPLING RURAL POPULATION OF CAMPINAS  
REGION PER OCCUPATIONAL GROUPS, 1971\*

Educational level	Small farmers	Farmers	Orchard Growers	Rural laborers	Leasers and cropsharers	Administrators & Managers	Other rural workers	Nº	TOTAL
Illiterate	14,68	0,00	22,86	32,00	46,87	11,54	35,00	101	20,36
Elementary incomplete	33,34	16,00	18,57	45,33	43,75	32,70	25,00	155	31,25
Elementary complete	35,59	14,00	34,28	21,33	6,25	28,84	30,00	139	28,02
Junior high incomplete	3,96	6,00	8,57	1,34	0,00	5,77	10,00	24	4,84
Senior high complete	7,34	24,00	5,71	0,00	3,13	13,46	0,00	37	7,46
College Incomplete	0,00	2,00	1,44	0,00	0,00	3,84	0,00	4	0,80
College complete	5,09	36,00	8,57	0,00	0,00	3,84	0,00	36	7,26
TOTALS	100,00 (177)	100,00 (50)	100,00 (70)	100,00 (75)	100,00 (32)	100,00 (52)	100,00 (40)		100,00 (496)

\* Source:- Author's survey: Project ATEX-3/71.

In differential terms, the analysis of the Campinas region's rural population's educational level shows a rate of 20,36% of illiteracy, a rate which is below Brazil's average (50% illiterates), and above the 18,2% coefficient of illiteracy for the Campinas County calculated in 1969 (14:p. ). It is possible that if immigration flows into the area is controlled, Mobrai will attain its objectives of doing completely away with illiteracy before 1980. The great mass of population which have been coming into the area recently, specially the landless people are the ones who indicate a more marked illiteracy than the other rural groups (14,14%). The empirical data which result from survey are evident if compared to the global data of the region's population, whose age bracket from 5 to 9 amount to 247,000, of which 206,000 are enrolled in elementary schools representing 83% attendance (15:p.197). Through quantitative inference we have a 20% rate who fails to attend or to register an elementary school. Such a rate strengthens illiteracy percentage.

It can be admitted that 59,27% of the rural population are within the

elementary level (complete and incomplete), and several occupational levels are represented in it. In this level there are farmer groups even the most modest rural workers. From this number several have not finished elementary school, with just 28,02% of the population's total completing it. Listed in the real-estate owner group, 26,94% have not concluded elementary school whereas 31,65% , practically inverting this rate, with the non owners', as 37,69% are the ones who have not finished and 22,61% encompass the ones who succeeded in terminating it.

In the Campinas rural area, 12,13% of the population have the secondary level education, and in their majority have already finished junior high school, whereas 8,06% have college level as in the case of farmers, small farmers and orchard growers who perform part time work on the farm. This situation of high educational level is understandable if one considers the important tradition that education has enjoyed in the region. The Campinas Catholic University (UCC) and the Campinas State University (CUEC) are the two great influential centers in the region and they are felt inclusively in the industrial field, regardless of other centers or higher teaching colleges spread throughout the county seats. Table number 8 explains the percentual differences among the owner's and nonowners' group.

TABLE Nº 8  
EDUCATIONAL LEVEL OF SAMPLING RURAL OWNERS AND NON OWNERS, 1971\*

EDUCATIONAL LEVEL	Proprietors			Non Proprietors		
	Interv. nº	Positive answer	rate %	Interv. nº	Positive answer	rate %
Illiterate	297	42	14,14	199	59	29,65
Elementary incomplete	297	80	26,94	199	75	37,69
Elementary complete	297	94	31,65	199	45	22,61
Junior high incomplete	297	16	5,38	199	8	4,02
Senior high complete	297	29	9,76	199	8	4,02
College incomplete	297	2	0,67	199	2	1,00
College complete	297	34	11,44	199	2	1,00

\* Source:- Author's survey: Project ATFX-3/71.

A reversible causal relation is, doubtlessly, the parents' aspirations and interest towards their children's education. This relation can be explained this way: as industrialization impact increases so does the interest for a higher level of education; as the interest for education rises so does the degree of industrialisation. That is why this reversible causal relation demonstrates the fact of education being an infra-structure and consequence of industrialisation.



When the family chiefs were queried on the educational and professional level they desired for their children, most (19%) of the informants showed a liberal tendency in their answers, making it a point that their male descendants should choose the profession that interested them most, or the one they had a vocation for, however 16% of the family chiefs insisted on indicating high level professions for their children, such as physicians, civil engineers, agronomists, lawyers and scientists. In a lower aspiration plan are the ones who favor technical professions (0,03%) and those who show concern as to their learning a specialised (9%) or semi-specialised (7%) manual experience. In a general way, the parents advise their children to have executive jobs or some "honest profession". The tendency is that the parents' concern and perception is turned to the city or industrial influence, and this becomes evident in the different rural groups, except those of farmers. The rule, however, is that there is a tendency in all rural groups for placing their hopes for their children to attain a privileged position in life. Approximately 10% did not think or did not know, whereas only 17% skipped giving any indications, while 18% favored "any profession except farming", "he does not expect much because he is poor", "they are very young", or still "they are already married", "they already have a profession", or "something better". A similar fact happens in relation to the professional expectation which parents have in regards to their daughters, although a marked number (44%) prefer their daughters to take the initiative in choosing their own profession.

## 7. INDUSTRIAL DEVELOPMENT AND AGRICULTURAL CHANGE

Industrial economy, according to Marshall's Typology, must be examined with the factors: land, work, capital and organisation in mind (16). The soil, as Parsons points out, in economical tradition, has been treated as a natural resource, which, for economical analysis purposes, is considered given (17:p.146). Dimensions and quality of the soil do not have a great meaning if it is not associated to a form and system of exploration. That is, the characterisation of technology and the cultural values turned to land use, can serve as basic indicators in order to admit to what extent industrialisation is acting upon traditional structures of tendency (Occupation) of land, and the incoming results of such influence.

In the Campinas rural region, the tendency in the various counties is desintegration of a part of rural properties, due to the great value of same, due to: 1) the strong process of county urbanisation; 2) spread of industrial plants; 3) agriculture's emerging incidence as part time activity; 4) and as consequence of the great money value of the soil; another sector of the properties tend to absorb small farms. Among the proprietors of land, those who own small and medium sized properties reach 87% of the total, there remaining only 13% of large properties, of which very few go over 320 alqueires paulistas (1,920 acres). In the past

in view of the competitive process of industry and commerce, many traditional land owners, known as "Coffee Barons" or their descendants, sold their properties and lured by the metropolis and the new industrialisation business, moved to the cities.

An analysis of the origin of land ownership in the rural area, shows that a majority of them originates from inheritance (28,62%) only outnumbered by the purchasing process (60,27%) which means that there is at present a property renewal, coming to an ecological process of succession of the population which once dominated the region with large and medium sized properties. Primitive forms of land origin as ownership are still found in some far off inland areas (1,34%). A more detailed insight about group description is found in table nº 9.

TABLE Nº 9  
ORIGIN OF RURAL PROPERTY ACCORDING TO DIFFERENT  
OWNING GROUP. 1971\*

Origin of property	Small farmers	Farmers	Orchard Growers	nº	TOTAL %
Inheritance	31,07	44,00	11,42	85	28,62
Purchase	55,93	50,00	78,57	179	60,27
Took over	1,69	-	1,42	4	1,34
Inheritance and purchase	2,82	6,00	1,42	9	3,03
Inheritance and took over	1,13	-	1,42	3	1,01
Other origin	3,39	-	5,71	10	3,37
No data	3,95	-	-	7	2,36
TOTALS	100,00 (177)	100,00 (50)	100,00 (50)	297	100,00

\* Source:- Author's survey: Project ATEX-3/71.

The work, in empirical terms, in the industrialisation process means rational, systematic activities aimed at an optimum productivity. Before considering the subject of industrial laborers in an analytical manner, it is important to examine how labor and the farm-bound works are oriented. In this region, in a certain way, it is evident that agriculture mechanisation implies a strong reduction of the population directly connected with agriculture, with the consequent reinforcement of tertiary activities, and for that purpose the rural population tends to migrate to the region urban centers (Campinas, Limeira, Americana, Sumaré, etc). So, for example, in the city of Campinas during 1969, from a

total of 67,707 people with permanent jobs. both in the city and in the rural area, nearly 76% of that number corresponded to tertiary activities and the remaining 24% to industrial employment (9:p.19), and only 0,5% corresponded to the field of agriculture.

TABLE Nº 10

DISTRIBUTION OF ECONOMICALLY ACTIVE POPULATION OF  
CAMPINAS BY FIELDS OF ACTIVITIES

Field of Activities	%
Transformational industries	24,3
Non specified works	19,8
Business and warehousing	16,2
Teaching, Health and Social Assistance	9,6
Civil construction	6,9
Government Administrative works	6,7
Transportation	6,3
Financing and Insurance institutions	2,6
Office works	2,3
Public services	2,2
University professions (college level)	1,5
Defense and Security	1,1
Agriculture, Cattle raising, Extractive	0, 5
TOTAL	100,0

\* Source- SERETTE

There still persist the most varied forms of land exploitation, beginning with those of the enterprise kind to traditional systems of "meia" (half ) or "terça" (one third), The "on one's own". "leasing" and "partnership" systems of exploitation is made by a large number of small farmers and that amounts to 78% of this occupational group; whereas the number of farmers who work their lands come to 88%, and such a percentage drops when it deals with orchard growers who themselves till the soil (64%). That is explained because many of them do it as a part time, and they transfer the land's exploitation activity to a "caretaker" or a person who takes care. The general average is 76,66% of the

The "leasing" system in land exploitation reaches almost 6% of the several ways of land exploitation. Mainly many small farmers and orchard growers, as well as the farmers themselves try to lease part of all the property for its

exploitation. Approximately 7% of small farmers, 9% of farmers and 2% of orchard growers rent their land to a third party.

TABLE Nº 11  
USAGE OF SOIL IN THE CAMPINAS REGION, 1971\*

Discrimination	Sampling Frequency	%
Permanent crops	265	29,28
Annual crops	200	22,09
Pastures	207	22,86
Woods and glens	100	11,04
Untilled soil	59	6,51
Unusuable soil	50	5,52
Other soil uses	24	2,65
TOTAL	905	99,95%

\* Source: Author's survey

The "partnership" system which is practiced in this region for the exploitation of land is similar to the one witnessed in other areas of São Paulo State and even of Brazil. "Partnership" is an agreement between the owner of the land who grants usage to a third party, keeping the right to part of the produce obtained by the other one. The Brazilian Civil Rights Code, Article number 1410 recognizes, inclusively, farming partnership as follows: "Agricultural partnership is granted when a person allows the usage of land by a second party, for cultivation, with produce being mutually shared in the proportion agreed upon". Hence, the "partnership" system can be shared in the following proportion "half", "one third", "one fourth" according to stipulation and agreements made. One can deduce that the "partnership" incidence is practiced mostly in the far off regions, notwithstanding people's resistance due to the spread of industrialisation, as only 3% of the rural population utilizes this system; 2% of the population uses the most varied forms of land usage, beginning with those that are "granted" with no payment up to the most diversified manners of partnership and leasing associated with direct exploitation.

A reflex of exploitation's economical importance lies in the form of its occupation, getting to reach high usage proportions if compared to other regions. The system of intensive farming stands out by the advantages offered by artificial irrigation and the kind of farming being performed. The survey data can be considered as the region's most positive results, since there was not a source able to supply us with at least approximate indicators about the amount

of farming profitability

The inspection of the following figure shows that the proportion of land usage in "permanent crops" is the highest (29,28%) particularly due to fruit growing, in view of the soil's high price, followed by "annual crops".... (22,0%) with sugar cane standing out. The persistence of other annual crops ("corn", "black beans", "rice" and "potato") considered as little profitable, as explained by agronomists, is due to lack of an accounting control by small and medium sized farm owners.

The area of land set aside for grazing is equally worth noticing .... (22,86% of the total), in spite of cattle growing's progressive decrease and which tends to move to other places, or to transform into a more rational cattle growing activity covering more limited extensions of land, specially in the case of the care required by dairy production. All of this can be witnessed in view of industrialisation's demands which finds support in more rational and organised activities.

The area has practically lost its forest reserves, since only 11,04% of its surface is covered by "glens" rather than "woods"; this is a direct result of coffee spreading throughout the country in the past, during which time the virgin jungles were leveled to the ground without any forecast for future needs.

6,51% of the total of the lands occupied are considered untillable according to rural population's testimonies, that is, not adequately usable, thus making up an eventual resource for agricultural increase in the future, 5,52% at least considering the technological means and money availability to drain out flooded areas or fertilize poor soils.

Finally, 2,65% of the region's surface receives some attention as far as usage is concerned, like those used for quarry, sand mining or clay used for china and brick making. In a general way, more than 3/4 parts of its surface are exploited. Such utilization of the natural resources is due to industry's motivation requirements or as an element of it, as it happens in Limeira, where most of the citrus plantations are located, in order to supply the new juice factories.

The agricultural transformation of the region is evident in face of the technological means and work systems. The motor propelled farming implement is another indicator that shows the technology stage attained by industrialisation's demands. A rational work with the minimum number of laborers is predominant in this region's farming. The agricultural system "plantation" like in its traditional form is practically non existent. The new "plantation" evidently bears the industrial mark, as it happens at Santa Bárbara D'Oeste, Piracicaba and neighboring towns' sugar cane plantations. The capital disbursements for farming machinery and processing equipment tends to eliminate labour to a great

extent, with the latter's migration to industrial cities and their being a permanent unskilled labor force.

In the following table 12 are shown the motor propelled implements used by the rural population. The table can appear deceitful due to the rural groups that do not own land, such as laborers, cropsharers, leasers, administrators and including "orchard growers" due to their land being no larger than one alqueire (6 acres) and their impossibility to be worked by motor-propelled tractors and implements, as it would be uneconomical, and they would be idle material, the same as happens with animal pulled implements. On the other hand, if one considers the group of farmers and small farmers, the situation is opposite, for the number tends to increase percentually. Of the farmers and small farmers together, a great number own ploughs (42,73%) as seen in the following table. The restriction would relate only to the sugar cane planter and fertilizer spreads which show a reduced number due to the fact that some leasers and administrators own this implement, and the same happens to sugar cane shredder which is commonly used among "chacareiros" (orchard growers) and other farmers.

TABLE NO 12  
MOTOR PROPELLED IMPLEMENTS USED BY FARM WORKERS IN  
CAMPINAS REGION. 1971\*

Implements	Do not own or have not stated	Have	Total 496
Ploughs	69,14	30,86	
Grills	73,17	26,83	
Furrowers	83,26	16,74	
Planter and sugar cane Fertilizer spreader	91,93	8,17	
Fertilizer spreader	88,10	11,90	
Cultivator	89,91	10,09	
Furrow ridger	94,76	5,24	
Lime spreader	92,53	7,47	
Cart	74,58	25,42	
Harvester	89,10	10,90	
Shredder	81,84	18,16	
Mill	88,10	11,90	

\* Source:- Author's survey.

A technological manifestation which expresses the high stage of industrialisation influence is the system of work witnessed with the care of soils for cultivation.



TABLE Nº 13  
MOTOR DRIVEN IMPLEMENTS OWNED BY REGIONS' FARMERS AND  
SMALL FARMERS, 1971\*

Implements	Farmers				Small Farmers				Total of those who have. Freq. %	
	Have Nº	Have not %	Have not nº	Have not %	Have nº	Have not %	Have not nº	Have not %		
Ploughs	65	36,72	112	62,28	32	64,0	18	36,0	97	42,73
Grills	54	30,51	123	69,49	30	60,0	20	40,0	84	37,00
Furrowers	28	15,82	149	84,18	24	48,0	26	52,0	52	22,90
Planter and sugar cane fertilizer spreader	9	5,08	168	94,92	8	16,0	42	84,0	17	7,49
Fertilizer spreader	22	12,43	155	87,57	8	16,0	42	84,0	30	13,21
Cultivator	22	12,43	155	87,57	1	2,0	44	88,0	28	12,33
Furrow ridger	6	3,39	171	94,61	6	12,0	44	88,0	12	5,28
Cart	30	28,25	127	71,75	27	54,0	23	46,0	77	33,92
Harvester	15	8,47	162	91,53	12	24,0	38	76,0	27	11,89
Shredder	28	15,82	149	84,18	25	50,0	25	50,0	33	14,53
Mill	17	9,60	160	90,40	15	30,0	35	70,0	32	14,09

\* Source:- Author's survey: Project ATFX-3/71.

Upon examining the behavior of rural groups such as "chacareiros" (orchard growers) "fazendeiros" (farmers) and "sitiantes" (small farmers), it can be noticed that only 42,76% among them undertake soil analysis of their properties. For such purpose they come to Campinas, Sumaré, Paulínia, Pedreira and São Paulo where they find organised institutions for such a purpose; Thus they seek the services of Campinas Agronomical Institute, Ultrafértil at Sumaré, and the Cotia Cooperative at São Paulo. In a lower proportion the organisations that sell fertilizers such as Santa Clara, Quimbrasil, Adubos Viana, etc, are sought by them, and still in a lower proportion the analysis of such soils are requested from the region's agronomists working for the Agricultural Extension Department.

Soil conservation is a well known practice both among proprietors and farm administrators. The farmers, small farmers and orchard growers group, amounting to 44,10% follow this practice; But in a general way the "contour curve" is the most predominant system (17,54%), followed by "terracing and contour curve" (14,31%). In reality few are the ones who use "Terracing" exclusively, (4,83%) in the region.



TABLE Nº 14  
AGRICULTURE TECHNIQUES USED BY CAMPINAS  
REGION FARMERS, 1971 \*

Techniques	Small Farmers		Farmers		Orchard Growers		TOTALS		
	Yes	Not	Yes	Not	Yes	Not	Yes	Not	%
Soil analysis	78	99	37	13	12	58	127	170	42,76
Soil conservation	79	98	39	11	13	57	131	166	44,10
Soil corrective agents	100	77	33	17	25	45	158	139	53,19
Fertilizers	128	49	36	14	32	38	196	101	65,99
Copper fertilizers	100	77	39	11	20	50	159	138	53,53
Defensives	134	43	43	7	46	24	223	74	75,08
Crop rotation	53	124	10	40	5	65	68	229	22,89

\* Source: - Author's survey: Project ATEX-3/71.

The use of soil correctives is more frequent in the three groups mentioned, as it reaches 53,19% of them; in the region, the tendency for the population to use lime as the most adequate corrective is 40,13%, certain farm people attempt to make mixtures such as "bone powder with chemical fertilizer and animal manure" (2,82%). On its turn a small minority (1,20%) uses lime mixed with fertilizer or zinc, according to soil requirements. Remains of old techniques become evident because modern and traditional customs tend to amalgamate.

The use of factory-made fertilizers has become practically a habit in the region's rural population. Due to the high percentage (65,99%) of small farmers, farmers and orchard growers usage is a must in face of modern agriculture's rational demands. The practice is to use nitrogen, potassium, phosphorus simultaneously (32,05%), whereas the utilisation of fertilizers such as Manah which, besides the three ingredients, contains sulphur, is required by 11,89% of rural people. The utilisation of nitrogen alone (1,00%) phosphorus (0,60%), potassium (1,00%) is relatively lower; the combination of both elements nitrogen-potassium (1,00%); nitrogen-phosphorus (2,21%), potassium-phosphorus (1,00%) becomes evident, but not so much as the group that prefers the three elements combined.

The practice of using surface fertilizers, which is still unknown in many parts of Brazil and South America, is becoming a must, since 53,53% applies it. 23,18% of the region's rural workers utilise nitrogen-potassium-phosphorus and in smaller proportions each one of these substances isolated or combined with one another.

The use of insecticides is doubtlessly an agricultural task which binds most of the rural groups, considering that 75,08% of owners (small farmers, far-

mers and orchard growers) do it. Of course, the employment of insecticides depends on the pests or diseases which affect crops, however, the following list is both suggestive and self explanatory: Aldrim (7,25%), DDT (3,42%), BHC..... (9,88%), Aldrim-DDT (3,02%), Aldrim-BHC (2,42%), Aldrim-BHC DDT (7,86%), BHC-DDT (8,26%), Mirex-Shell (7,66%) and other insecticides (14,31%).

The proportion (22,89%) of land-owning, rural groups who undertake crop rotation is relatively low, and this can be understood in a certain way by intensive farming or great yield farming particularly because of fertilizer usage as has been noted.

As an addition to the indicators that justify how rational farming exploitation has become in this area, another indicator is the marked concern for the use of selected seeds which amounts to (30,45%). The proper seed is purchased in the County Agents, Ultrafertil and from other sources besides some farming leaders who secure their seeds from foreign sources.

Capital as a production factor is closely associated with the latter, and it is not like the soil and labor which are, to a certain extent, production's independent factors. The capitalisation of the industrial process is tied to favorable historical factors, whose analysis in the region allows the explanation of economical cycles of processes. Coffee development first and later the start of railways around 1870, consolidated the City of Campinas as an influence pole in the hinterland cities, giving way to commercialisation. This situation lasted until approximately 1950 when a great number of foreign investments (German, English, American, Italian, Chinese and French) began to come in. If Brazilian capital was an incentive in the application of the region's small and medium sized industrial plants, foreign capital was directed toward Steel mills with a more elaborate administration and know how. Approximately 7,203 industrial enterprises dot the region, with a great many important industries spreading their plants into the rural area. 15,00% of these industries are located within the Campinas County, with many of them being the most important in Brazil, such as Robert Bosch with more than 4,000 employees in the payroll, 3,400 among them being skilled; Singer Sewing Machine Co. with 2,334 and 980 of them skilled laborers, General Electric with 905 and among them 256 are highly specialized; Merck, Sharp and Dohme, Bendix do Brasil, B. F. Goodrich, Dunlop which belongs to Pirelli at present, and Equipamentos Clark. Paulínia County has been awarded with Replan (Plateau Oil Refinery) which is able to process 252,000 oil drums a day with an investment of over 530 million cruzeiros; Rhodia (which operates both in the agricultural and industrial field) who has recently finished building its phenol plant the only one in South America; J. Bresler S. A. a cardboard factory; Levefort S. A. a boat factory; Dekalb Agricola do Brasil a subsidiary of Dekalb Agricultural Research Inc. of North America and likewise Hyline Agro Comércio Ltda. At the Americana County founded by

North-American immigrants after the Civil (Secession) War, there are 580 textile factories, with a good many of them included in the fashion line where 15,000 employees work. Limeira with nearly 400 industries, with Fumagalli (car wheels) standing out; Máquinas Varga (brakes); D'Andrea (agricultural machines); Luccate (farming mechanics); Invicta (lathes) and a large number of shoe factories. In a general way, on Dec, 31, 1967 there were 7,203 industrial establishments, 140,377 laborers which produced 2.680,378,000,00 cruzeiros (22) with 492,288,000,00 corresponding to Campinas, in which only 24,023 employees were used ( ). In the agricultural line (field) for the Campinas' 1968-1969 agricultural year, there is an estimate reaching Cr\$ 116,526,000,00 the amount of merchandise transacted, with cotton standing out (59,5%), coffee (18,7%), and brown beans (6,4%). In a certain way farm yield is much lower than the industrial output as far as commercialisation is concerned, which should not be a wonder when the social-economical development involves a high doses of industrialisation.

Capitalisation in the Campinas region has a system which started with basis in agriculture to be later outdone by commercialisation and industrialisation and finally with the rural area serving as backing up for industrial expansion, since the necessary infrastructure was consolidated for a new modular motivation for industry in this area. The capital investment followed a system, providing the necessary pattern so that the capitalisation of industrial growth would not be weakened and this was followed at the same time by a change of ideology in the rural and urban mentality, in such a way that the rural and urban leadership attained a great achievement power, and that fact should be interpreted according to McClelland's theory (23).

No less suggestive is the analysis to prove the stage of capitalisation, capital circulation, and change of mentality. For such, it becomes necessary to examine the rural groups' behavior with regards to banking institutions, as well as the good use of loans secured. It is important, however, as a means of illustration, to emphasize that in 1971 Banco do Brasil's Clearing House cleared 4,482,147 checks, on the amount of Cr\$ 4.620,995,823,84 and 470,271,104,00 out of that, being cleared through Campinas' Banco do Brasil with credits being diverted to the widest varieties of activities such as (commerce, industry, farming, tourism, etc.,) amounting to Cr\$ 444,846,790,29 ( ).

Members of the rural population, when inquired about requesting bank loans, confirmed that 37,09% had done so, while 42,33% had not applied for a loan, whereas 20,56% had no condition to effect it, mainly due to their condition of traveling workers, as in the case of many of the members of laboring groups. Most of the farm owners (21,97%) practically renew their loans every year.

The banking institutions that provide loans and financing to farmers are in the following decreasing importance order: Banco do Brasil with 38,04 % of the total, followed by Banco do Estado de São Paulo (S. Paulo State Bank).... (17,39%), Banco Itaú-America (10,32%), Banco Comércio e Indústria de São Paulo,

(11,41%), Bradesco (Banco Brasileiro de Descontos) (10,32%), Banco América do Sul (1,63), and other private banks (5,97%), 4,87% did not produce any information. The largest loans granted, as one can notice, corresponded to Banco do Brasil.

Loans inferior to Cr\$ 10,000,00 (Us\$ 2,000,00) are practically made by all banks and amounts to 47,82% of loans applied for by several rural groups.

Generally the bank policy is to try to grant loans when requested, with very few turning down applicants, and this is due to many bank patrons who do not possess the necessary requirements demanded by the lending bank. This refusal percentage amounts to 4,43% of the total rural population.

In securing the loan, many farmers have to put up their rural properties as guarantee (30,62%), and their farm production (9,25%) their cattle..... (5,55%), farming implements (5,55%), their means of transportation (1,22%) or will present co-signers, endorser, co-lateral or responsible parties (14,80%).

TABLE Nº 15  
MOST USED CREDIT BANK INSTITUTIONS BY REGIONS' FARMERS, 1971 \*

BANKS	Volume of Bank loan							TOTALS		
	Less than \$ 10,000	From 10.000 to 20.000	From 20.001 to 40.000	From 40.001 to 80.000	From 80.001 to 160.000	Above 160.000	Variable	Not indicated	Freq.	%
B. do Brasil	31	11	6	4	1	1	3	13	70	38,04
B. do Estado de São Paulo	16	6	1	4	-	-	5	-	32	17,39
B. Com. e Ind. do Est. S. Paulo	12	1	1	-	-	1	3	3	21	11,41
B. Itaú-América	13	1	2	-	-	-	2	1	19	10,32
Bradesco (Brasileiro Descontos)	10	2	2	-	-	-	-	5	19	10,32
B. América do Sul	2	-	-	1	-	-	-	-	3	1,63
Outros Bancos particulares	4	-	1	-	1	-	4	1	11	5,97
Não obtiveram empréstimos	-	-	-	-	-	-	-	9	9	4,89
TOTALS	88	21	13	9	2	2	17	32	184	100,00
%	47,82	11,41	7,06	4,89	1,08	1,08	9,32	17,39		100,00

\* Source:- Author's survey: Project ATEX-3/71.

A large number of well known farmers and small farmers have ready credit, due to being bank patrons or being acquainted with bank managers. Many of the farmers who

request bank credit point out that they meet with difficulties when they cannot produce business references, or because of red tape, or because it is the first time they have attempted to secure a loan, however, outside of those obstacles they generally obtain the bank cooperation they are requesting.

The manner whereby a request for bank credit is presented shows the mentality of this region's farm people, quite different from other parts of Brazil in which many institutions such as ACAR, ANCAR, ABCAR, etc., attempt to orient and supervise the credit of Loans and Savings Associations (Caixas Economicas) meant for the farm people. Generally the bank credit in the Campinas area is aimed toward a rational application, such as enlargement and improvement of buildings, silos, etc., the purchase of fertilizers, soil correctives, electrification projects, implements, machinery and so on, with the idea of securing a qualitatively improved and larger production.

The rural population, though a reduced percentage (10.97%) secures, to a certain extent, assistance from São Paulo State's Agricultural Department. This assistance is meant in the form of information, experts' periodical visits, consultations, counseling, soil analysis, the teaching of new techniques and new knowledge for the purchase of agricultural tools, implements and seeds.

Two fundamental factors have contributed to the development of the rural area: one the eminently economical nature, associated with the variables : capital and work (Parson: 149) and the other of a social nature cristalised in its institutional meaning, whose structure aims at instilling a philosophy or adequate activity "policy". These two organisational factors have been made to feel in the Campinas region. Regardless of the economical factor, the institutional sources which have affected this region's rural environment can be considered: 1) according to official bureaucratic conditions and 2) by the very initiative of the rural population in leading the rural innovation.

Of the official bureaucratic departments, some have disappeared, others still remain and there were those which underwent progressive changes according to the necessities of the rural problems. The best known organisation is the State of S. Paulo's Agronomist Institute, known more frequently as "Instituto Agronomico de Campinas", which is a department of the Secretariat of Agriculture whose main calling is to undertake research and experiments in the wide and complex field of cultivated plants, soil and agricultural climatology. It was created as a result of the Imperial Decree of June 27, 1887 and it has given incentive to the region's agricultural development as well as to the State of S. Paulo, although its influences are deeply felt in different parts of Brazil. Its organisational structure comprises: 1) General Directory; 2) Division of Auxiliary Basic Technical Attivities; 3) Division of phytotechnical Biology; 4) Division of Agricultural Engineering; 5) Experimental Stations Division; 6) Horticulture Division; 7) Industrial Plants; 8) Soils Division - Technical Scientific Information Service; an 9) Administration Division. The Campinas Experimental Cen -



ter covers about 700 hectares and the experimental units come to 5,000 hectares . Research is done in the field of coffee, cotton, sugar cane, citrus, general fruit trees and oil-bearing plants, fibrous plants etc. In these works they attempt to undertake introduction, adaptation, selection and variety multiplication. fertilization, correctives, herbicides, rotation, harvest, warehousing , mechanisation of farm operations, planning of small agricultural enterprises , etc.

Another organisation of S. Paulo State's Agricultural Department is CATI (Coordination of Integral Technical Assistance) which tries to render assistance, through its various departments, to the farmer, by conveying him directly or indirectly the conquests of IAC researches and of other centers, and the necessary scientific knowledge.

Cetate (Center for Technical Assistance and Training) (formerly Cetrec) is one of Cati's Departments that should deserve special recognition because it provides up to date courses for the agronomists and communication experts in the region, as well as to all those who are associated with the preparation of the rural man. CATI also has a section aimed at the education of the young farmer, by taking cultivation techniques to him besides teaching him the organisation of social clubs. Another Department is Home Economics which strives to teach rural housewives how to take advantage of the means they usually have at their disposition in the rural midst.

For a greater efficiency of the rural extension work the Department of Agriculture has divided the State of São Paulo in farm regions. Each unit is given the name DIRA (Agriculture's Regional Division). Our local Campinas DIRA comprises the counties: Arthur Nogueira, Cosmópolis, Americana, Paulínia, Jaguariúna, Nova Odessa, Sumaré, Monte Mor, Valinhos, Vinhedo, Alias Fausto, Indaiatuba and Campinas. DIRA is directly associated with County Agents, who give guidance , prepare programs and make inspection. The County Agents render free technical assistance to the county's cattle ranches and farm properties.

The Campinas Experimental Farm. Fazenda Mato Dentro, is supported by the Biological Institute of S. Paulo State, which is subordinated to the State of S. Paulo's Agriculture Department. A great many livestock is raised on this farm such as cattle, swines, rabbits, sheep, tec.) in a special way, in order to be used later as suppliers of raw material for the manufacture and sale of serums and vaccines or as guineapigs to test these vaccines.

On this same experimental farm there are several sections which are dedicated to the study of Vegetable Biology. Pest and Nematology Sections which are a part of the Vegetable Parasitology Division; Diseases of basic food plants as well as olericultural plants, together with the Section for Industrial Plants Diseases which are both subordinated to the Vegetable Pathology Division; the Herbicides Section which belongs to the Agricultural Defensives Division; the

Bio-Statistics Section which is part of the Technical Activities Division, and so on. The purpose of this research center is to find means for the rural man to produce more a better. (18:p.37). Usually the farmers secure orientation from experts in order to fight against plant pests and diseases with insecticides, herbicides, fungicides, etc. but the results are not satisfactory, hence this research institute, supported by ecology attempts to study and to find the way to fight pests naturally by utilising the means which are peculiar or inherent to the plant, soil or the pest itself. Since chemical substances are generally poisonous, they can harm the soil, plants, people and animals.

The "Rural Social Service" ISR, a department of the federal government which has performed a very valuable labor in promoting the rural worker, has, unfortunately, been discontinued having been replaced by another department called SUPRA which, in its turn has been substituted by INDA and IBRA, which did not succeed in performing its functions and have been recently reorganized under the name INCRA (National Institute for Cooperation and Agrarian Reform). The latter, in the same manner as the former ones, has an office in Campinas City which serves the region. Its more recent work is to effect the registration of all rural properties and from there to its scheduled innovations.

The Agrarian Reform performed at Fazenda Capivari, during the Carvalho Pinto Government, according to some observers was made with political and electoral purposes only, and it shows that a farm can be subdivided into smaller properties, because certain problems of rural health endemic diseases tend to persist as was found out in our survey taken by the Campinas College of Social Services in July 1971.

The organisation of farms and small farms as truly productive enterprises with the proper accounting system and pertinent technicology, will become the core of rural development and will be the reference points for the regional and national agriculture. It is enough to mention two farms, the Meireles, a cattle and coffee farm which produces local high quality coffee and sets a record in milk production, and the "Santa Genebra Farm" at Barão de Geraldo, whose cotton production shows the highest levels in the whole country.

#### 8. THE RURAL POPULATION'S HOME APPLIANCES

An indicator which characterises the life standard of the rural population is, doubtlessly, the home appliances. This indicator, still shows another function, that is, to verify the degree of industrialisation's influence on the rural population. It is obvious that the non existence of home appliances demonstrates a low consumption of industrialised home products. In those groups in which the number and variation of equipment is presented it brings a motivation for transformation or already indicates a radical change in the rural man's life, thus incorporating him into the industrial society.

In a certain way, the work of most home appliances would be of no va -



lue should electricity not be spread throughout the country. It can be stated that this region is sufficiently served by light and power, to the extent that at least 80,63% of the rural population uses such power for light, whereas..... 13,70% do it with gas, kerosene, or candle light; just 5,67% did not present any information. It should be remembered that those who are not provided with these are generally the landless workers or the "marginal peasant", as Oberg (19:p. ) called him.

As basic indicators in the use of home appliances, the following appliances have been considered: refrigerator, stove, beater, liquidizer, dish washer, washing machine, press iron, floor polisher and sewing machine which work with electricity, or any other kind of power.

59,05% of the rural population uses refrigerators; 88% factory made stoves although the ones who own electrical stoves amount to only 5,43%, due to the majority using the conventional stoves which work with gas or kerosene. Countless bottled gas distributors sweep the area delivering their gas containers to users.

TABLE Nº 16  
VOLUME OF HOME ELECTRIC APPLIANCES OF RURAL POPULATION, 1971\*

Electrical appliances	Owners			Non owners		
	Electrical	Non electrical	Total	Electrical	Non electrical	TOTAL
Refrigerator	199 68,62%	9 3,10%	208 71,72%	84 40,77%	1 0,48%	85 41,26
Stove	25 8,62	211 72,75%	236 81,37%	6 2,91%	-	6 2,91
Beater	71 24,48%	4 1,38%	75 25,86%	21 10,19%	3 1,45%	24 11,65
Liquidizer	170 58,62%	1 0,34%	171 58,96%	70 33,98%	1 0,48%	71 34,46
Dish washer	6 2,06%	-	6 2,06%	3 1,45%	-	3 1,45
Clothes washer	90 31,03%	-	90 31,03%	27 13,10%	-	27 13,10
Electrical iron	230 79,31%	33 11,37%	263 91,72%	154 74,75%	19 9,22%	173 83,98
Polisher	126 43,44%	1 0,34%	127 43,79%	39 18,93%	-	39 18,93
Sewing machine	243 83,79%	6 2,06%	249 85,86%	120 58,25%	22 10,68%	142 68,93
TOTALS			290 100,00			206 100,00

\* Source:- Author's survey: Project ATEX-3/71.

The electric beater has not yet penetrated the popular homes as only 18,54% of the rural population uses it, quite different from the liquidizer, as 48,37% of the population uses it. The dish washer, no doubt, due to its cost and lack of habit in its use is still restricted to the rural high class, since a mere 1,81% of the rural population possess them. The same does not apply to the clothes washer

or "washing machine" because nearly one fourth of the rural families utilise it. It is evident that the electrical iron (78,41%) is apparently more spread, thus eliminating the old habit of using the charcoal pressing iron which still exist in just 11,89% of the families. The floor polisher is another appliance found in 33,22% of the rural residences. At last the electrical sewing machine is found in 73,18% of the homes whereas the manual kind is used by 5,64% of families. This fact is understood, since Singer Sewing Machine Co. is located in the area, as well as other home appliance factories.

On describing the use of home appliances by the different groups in the region's rural society, a compared analysis can be made, separating the owners group (farmers, small farmers and orchard growers) from those who do not own land (cropsharers, leasers, farm laborers, etc.). It will be noticed that such home appliances are important, which is not news, for the characterisation of their social-economical status. The electrical appliances, in some cases percentually, tend to duplicate in the group of land owners, thus in the case of stoves we have 8,62% for the former and 2,91% for the latter; the beater.... 24,48% and 10,19% ; dish washer 2,06% and 1,45%; the polisher 43,44% and 18,93% respectively; as to the refrigerator, liquidizer, pressing iron and washing machines the differences do exist, but they are not worth mentioning.

The fact that the rural population uses modern, electrical appliance equipment, must not be considered strange, because these groups belong in rather high income brackets, including the unskilled laborers who earn the region's minimum wages. The tendency is for the rural people to become more and more incorporated in modernisation's process.

#### 9. RURAL HOMES AND THE FARMER'S SANITATION LEVEL

The home is not only an economic indicator but a social reflex of cultural standards and the resident's status as well. The resident's physical structure in Campinas region is another evidence to prove the degree of an adequate symbiosis between industrialisation, modernisation and agriculture. The fact that 75,80% of the rural population's having brick homes is a marked index that constructions are sturdy and healthful and it becomes even more expressive if one stops to think of the well plastered, brick walls (8,26%), and those of brick without any plastering (6,25%) makes up a minority; The adobe homes are practically disappearing (0,40%), and the same happens to the roof-thatched ones (1,00%). Finally 8,27% mix several materials for their wall making. Consequently the structure itself tends to create great differences between them and the others already seen somewhere in Brazil.

Although most house roofings are made of tile or zinc sheets (the latter in smaller proportions), a high percentage does not have ceilings (36,49%). It can be admitted that this kind of covering is outstanding among peasants who are not well to do, while those who have better financial possibilities have ho-

mes with ceilings (31,85%). Homes with ceilings are just beginning to appear in the rural area, among farmers and small farmers mainly (22,17%), however some of them build their homes according to more modern architectural standards, by using double ceiling or air-cushion (1,81%) to avoid heat concentration. Roof-thatched houses are practically non existent (2,62%) in the region. They use the most varied materials as a mixture (5,03%).

The home floor in its dominating aspect gets some attention on the part of the rural resident, tile, brick and cement flooring make up the majority (42,37%), followed by wooden floor boards low quality parquet blocks (26,81%), while those who have high quality wooden floor boards or parquet blocks (hard wood) reach 13,91%; The most modern and luxurious houses with ceramic and marble floor make up only 4,83%. A mere 7,83% of the abodes have ground floor, and... 4,83% use the most varied materials mixed with the ones indicated above. The sociologists who have studied the homes in other rural areas of São Paulo State, and mainly in Brazil, can be surprised at the high level of house standards which characterises this region, however, it is not a wonder that the contribution of innumerable factors (mass communication means, a great social mobility, high purchasing power, ease in securing construction materials, etc.) permit the construction of beautiful and healthful residences.

The state of maintenance of the home is not only an indicator of the region's sanitation stage but as a result of implanting standards that are required by modern industrial life, as well. The maintenance of the house is a very little developed standard in Latin America as a whole, both in the urban and in the rural areas, however, under the impact of industrialisation's demands there is a mentality renewal toward avoiding deterioration, specially. This becomes evident in the rural area under survey, since 48,99% of the homes are in a good conservation state. To this number one can add 16,93% of the constructions which are rather new, making up a total of 65,92%. Poorly kept houses 15,92%, old ones 10,48%, 4,03% needing repair and only 0,40% unfit for use; For 3,22% of the homes the information was not enough for an adequate classification.

The region's rural home is not very different from its city counterpart in its architectural shape, as in the number of rooms, depending generally on the family size and on the owner's financial condition. In almost its totality (91,10%) of the homes have four or more rooms thus compiled, 13,91% with four, 21,77% with five, 18,54% with six, 10,28% with seven, 10,88% with eight and 15,72% with more than eight. Only 8,90% have fewer, being 4,23% with three rooms and the remaining, one or two rooms. One out of these rooms is used as a bedroom in 5,84% of the constructions, two in 32,86% three in 38,50%, four in 10,88%, five in 3,42% and over five in 2,81%. We gather that approximately 82,24% of the abodes contain between two and four rooms as dormitories. This rate is relatively meaningful because anthropoxin problems and secrecy problems are driven out, thus giving the home its adequate functionality.

The Inter American Center for Living and Planning points out that "surveyors of Brazilian rural life agree that sanitation conditions are far from desirable" (20:p.31). In fact, if we consider some regions such as certain areas in Minas Gerais or the Northeast, Northern and Central-Western Brazil and even S. Paulo's Northern and Southern coast one can accept such a generalisation. However, the area under survey, can take on new perspectives, if one conveniently analyses the water, sanitation, destination of used up water and garbage destination indicators. The water that is utilised in the rural people's homes, showed 55,03% as being piped water, although they may have the most different sources such as spring, fountain, artesian well, or just a cistern or well. In a smaller number only 11,48% make use of spring, fountain, 30,04% use the well, 0,20% get water from streams, and 3,20% obtain water from different places. 49,79% drink this water in its natural state; 44,55% make use of filters and a mere 1,20% drink water after it has been boiled. Only 0,26% indicated they use mineral water for drinking purposes. However, 4,03% skipped giving any information on this particular. The tendency among the native rural population is to keep themselves from being contaminated with infectious diseases transmitted in the water, whereas many of the traveling laborers there have no proof of fear of microbes that would lead them to use water prophylaxy. On the contrary, many of them are disease laden and do spread it and thus they contaminate the areas as in the recent example of Schistosomiasis appearing at Praia Azul.

On the sanitation line, only 0,43% do not have any kind of toilet room, while the majority (92,32%) have it; Just 7,25% avoided providing any information. 55,64% of the rural population have toilet rooms inside their homes; 36,08% outside and 0,60% both inside and out of the house. As to the type of toilet bowl, the modest setting in which they are and the ones with flushing water amount to 42,53% of the rural population. The septic tank or "little house" outside the home is frequent in 23,17% of the people. The luxurious bathrooms with grade. A toilet bowls amount to 1,20%, and they are to be found in the farmer's homes. Regretably 36,08% were rather bashful and did not provide any testimonies on the subject. The region's sanitation level is very high as compared with other areas of Brazil, as in the case of "Palmital" and "Padre Nosso" where one's personal necessities are performed among banana trees and in the bush, not far from the house. The existing latrines are built over the water so that it becomes contaminated; there are families who use the same water a little ways down the stream (20:p.32), or at Potengi which does not have a water and sewerage system like most of the Lower São Francisco River settlements. In the above mentioned village only the farm homes have the dry-well kind, and only the local elementary school is supplied with water flushing. The whole of the population defecate in the woods or among the brush. (21:p.49).

In the rural area where as a rule, there is not a sewerage system and garbage collecting, the destination given to used up water and garbage make up

indicators of the sanitation level. In the Campinas rural area 35,08% use underground tanks previously dug up for such purposes and only 7,86% boast a sewerage system which is nothing but an extension of the city system; 14,11% discard it in the river or stream; 8,66% pour it somewhere in the property; 2,82% in the backyard; 3,22% in the swamps or among the trees; 0,80% dump it in an abandoned old mine (hole) and 27,41% stated having used various places. It can be informed that the people who use the most primitive ways to dump their used up waters, however, 50% act like the city standards, and this is due to modernisation's own demands, since dumping used up water in back yards creates an opportunity for insect increase and for producing unpleasant odors. The same applies to garbage destination and because of that 22,98% of the rural population incinerates or burns it whereas 10% utilise it as fertilizer, or they just throw it among the trees (8,67%), identical to the ones who dump garbage in their backyards (17,13%) or in the orchard, groves (9,87%). Some prefer to dump it in an open pit or ditch purposely open for that purpose (4,23%); and, 2,41% take advantage of the garbage truck that passes by with garbage collected in the city. There are also those who throw garbage in the river (1,81%). Without a marked habit, 15,82% of the population sometimes throws waste in the river, sometimes burns it, sometimes buries it and so on. From the sociographic description one can analytically infer that the home cleaning standards and the casual equipment allows a high sanitation level and as a consequence of its living stage and the country man's behavior it is relatively high in the sense of assimilating practices and customs which are caused by industrialisation.

#### 10. POLLUTION IN THE RURAL SURROUNDINGS

The change of physical, chemical and biological characteristics of the rural environment with disastrous results for the country settler, vegetable species and animals are already felt in the region as a direct growth of industrial plants. This is true mainly when the setting up of industrial plants are made in a careless, unplanned manner with the purpose of foreseeing contamination of the rural countryside.

Unfortunately, pollution is an objective indicator which becomes evident in a very advanced stage. Hence one can gather why in the above region only 14,92% of the rural population became aware of the meaning of pollution. And this is due to the fact that they are beginning to feel its effects, while..... 85,08% does not experience such a fact.

At least four kinds of pollution are noticeable in the Campinas region rural population: 1) Atmospheric, 2) water, 3) soil and 4) sound pollution. The atmospheric pollution due to the accumulation of carbon dioxide felt by the peasants due to the bad smell "bad odor" "they burn waste", by the exhaling of gas particles and even due to the cars nitrogen oxide. The farm people who live near the paper and cardboard factories, protest in the simplest manner by saying "it



is a shame! even the birds are dying because of the smoke these factories let out into the air", "they release bad smelling smokes". The water and river pollution, according to the rural peoples awareness, comes in second and they explain that it is caused mainly by the fact that factory wastes are dumped into the rivers; "the water tastes bad", "the fish are dying out", "they are making the water dirty". Pollution has not alarmed only the river and lake fishermen but they sort of forced the Agricultural Department to plant fish in the rivers with the spread of "pacús", "lambarís", forragers and fresh water shrimp, as in the case of the Americana Dam and in other areas of São Paulo State, but the rural population itself denounced that the polluted water affects their cattle. The land pollution, though the rural population who noticed it is small, is considered as "weakening the soil", "the soil will not yield". Like wise in the same proportion are those who indicated having noticed the sound pollution, mainly as a result of the noise made by machines. It is a well known fact that the tolerance of human hearing to noise is under 130 decibels. Factories located in the country do not generally take the necessary measures to muffle their turbine noises and as a result nearby residents feel quite uncomfortable due to excessive night work noise. Under the heading of various forms of pollution we have gathered the testimonies from people that have indicated both water and atmosphere pollution, sound and atmosphere pollution and some of them went as far as to mention "mental" pollution or loss of ideology exercised by TV as an insidious means of poisoning the mind.

TABLE Nº 17

AWARENESS OF POLLUTION ACCORDING TO RURAL OCCUPATION GROUPS, 1971\*

Pollution	Small farmers	Farmers	Orchard Growers	Laborer	Crop-sharer or Leaser	Administrator or manager	Other Rural workers	TOTAL
Atmosphere	20	2	2	10	2	-	1	37
Soil	1	-	-	-	-	1	-	2
Water	4	2	3	6	4	-	3	22
Sound	1	-	-	1	-	-	-	2
Various forms	5	-	-	1	4	1	-	11
TOTALS	31	4	5	18	10	2	4	74

\* Source:- Author's survey: Project ATRX-3/71.

The perception or awareness is more evident among land owners rather than among rural workers who are landless people. Although there is a certain



volumetric correspondence between the two groups about the several kinds of pollution, there is not, however, a correlation that can be meaningful between both groups, the linear correlation coefficient is .44 which indicates the smallest degree of perception and identification of pollution.

TABLE Nº 18

AWARENESS OF POLLUTION ACCORDING TO GROUPS OF OWNERS  
AND NON OWNERS, 1971\*

Pollution	Owners	Non owners
Atmosphere	32	5
Soil	1	1
Water	12	10
Sound	2	-
Various forms	6	5
TOTALS	53	21

\* Source:- Author's survey: Project ATFX-3/71.

Pollution's control and studies in this region are the responsibility of the Health Regional Division in its general aspects and the Environmental Sanitation Superintendency (SUSAM) which encompass all the problems of atmospheric pollution and the STATE BASIC SANITATION DEVELOPMENT (FESB) which is mainly in charge of pollution in bodies of water. The task of these entities, however, due to their own limitations is far from meeting its objectives completely, as they are social objectives, which include behavior, attitude and values to be considered for an adequate change in the preservation of human health.

#### 11. RURAL MIDDLE CLASS

If industrialisation is the main factor responsible for structural changes in occupational classes, chiefly in the level of semiqualfified work(24:p.22) in the State of S. Paulo's urban centers, is expectable that such consequences will strike the rural area, thus affecting the rural population's occupational diversification and differentiation. This becomes an evident factor in the region not only toward affecting the technological frame required by modern farming, but also toward unleashing conditions capable of altering the social structure itself. That is what has been happening in the region, without producing manifest conflicts or tensions among social classes, and this due to the progressive rise of the rural middle class. With the appearance of the rural mid-

dle class there appeared a multiplication of status groups, permitting, on its turn, a greater emphasis on social change followed by a transformation on the behavior of people who go up or down the social hierarchical ladder.

TABLE Nº 19  
RURAL PEOPLES CONCERN OVER SOCIAL CLASSES, 1971\*

Thought about Social class.	Owners			Non owners		
	Number of Interviews	Affirma- tive Answers	Rate %	Number of Interviews	Affirma- tive Answers	Rate %
Many times	297	60	20,20	199	18	9,04
A few times	297	87	29,29	199	44	22,11
Never thought	297	84	28,28	199	91	45,73
No information does not know	297	66	22,22	199	46	23,12

\*Source:- Author's survey: Project ATFX-3/71.

The proliferation of the region's small and medium sized rural property led, to a certain extent, to lift barriers between the two traditional social classes, that of the "rich", - great land owners - and that of the "poor", -farm laborers-. The option became even more open and the farm worker stopped being forever in debt with the farmer, as it used to happen in the past. The survey showed in an eloquent manner, in the rural groups, a concern for having reflected or thought about the existence of social classes and this is symptomatic to the definition of social condition in which the farm hand is found. From the total of the sample, 15,72% have thought very much and often about social classes;.... 26,41% have though a few times; 35,28% have never given it any thought, and 22,58% refused to present information indicating that they understood nothing about the matter. By polarizing the attitude of those who own land and those who do not, it will be noticed that the former, at least 50% had some thought about the subject of social classes, whereas for the latter the number drops to 31,15%. Presumably the class conscientiousness requires an intellectual basis or abstraction basis so that the farm people may be interested on class subjects. This demand would be a tendency for the definition of class conscientiousness or the awareness of social definition in which the peasant is included. Of course, if awareness is to show its deep rooted basis, it would have to denounce not only the micro - cosmic circumstances in which the individual is located but the power of projecting in a broader analysis, for which macrosociologically the Brazilian global society can be considered as a whole. Among all the farm people 37,90% considered the existence of three social classes in Brazil, although the rank in category

vary such as high class, middle and low, or rich class, middle and poor or still, superior, middle and inferior classes. 5,44% of the sample demonstrate the existence of two social classes, with emphasis on the oppressing and oppressed classes (rich and poor) or the poor and middle or "rich and middle" Only 2,02% suppose that there is only one class: the middle class, although they point out their subdivisions (medium-middle and medium-low). This farmer perception can be interpreted as an image which generalises, starting as of the social situation existing in the area. A small minority (1,21%) of the open minded people such as farmers indicate the presence of four social classes in Brazil. Truly it is a symptomatic fact that the majority (53,86%) of farmers having omitted the explanation of social classes which affects almost identically the owners' group as well as those who are not, as one can see in table number 20.

TABLE Nº 20  
SOCIAL CLASSES IN BRAZIL ACCORDING TO PEOPLE'S  
UNDERSTANDING, 1971\*

SOCIAL CLASSES	Owners			Non Owners		
	Nº of inter views	Afirmative answers	Rate %	Nº of inter views	Afirmative answers	Rate %
<u>Three classes:</u>						
(high, middle, low rich, middle, poor superior, middle, inf.)	297	122	41,07	199	66	33,16
<u>Two classes:</u>						
Rich and poor	297	13	4,38	199	12	6,03
Poor and middle	297	2	0,67	199	-	-
Rich and middle	297	-	-	199	1	0,50
<u>One class:</u>						
middle	297	8		199	2	1,00
four classes	297	4		199	2	1,00
there are no classes	297	=		199	1	0,50
does not know or did not answer	297	148		199	115	57,79

\* Source:- Author's survey.

The analysis of the role of the dominating rural elite becomes complex, either as stimulators of the middle class appearance itself, or on the contrary, doing everything to hinder such arisal. As a consequence, the middle class would be an indirect result of industrialisation, thus creating latent stimuli for the breaching of social tensions. These two propositions are worthy being computed at the light of empyrical data.

By comparing what the rural people think, if some class, in their opinion, is taking advantage in relation to his class, one can infer self-explanato

ry considerations; 35,68% of the total sample think that there are definitely classes that are taking advantage whereas 11,70% answered negatively; 31,65% do not know, 19,96% did not answer, and 1,00% presented the most varied answers. The discriminative conception as to what the different rural groups do, including that of the farmers, does not represent any manifested motivation that such tensions would be giving rise to the establishment of opposed social classes as Marx used to think about "proletariate" and "bourgeois" exactly at a historical occasion when Old Europe's industrialisation was spreading and growing. It makes no sense in the region, since empirical data tend to reinforce Dahrendorf's explanations (25:p.177).

TABLE Nº 21  
LIST OF CLASSES WHO ARE GETTING ADVANTAGES, ACCORDING  
TO RURAL PEOPLE, 1971\*

Classes that are getting advantages:	Owners			Non owners		
	Nº of inter views	Afirma tive answers	Rate %	Nº of inter views	Afirma tive answers	Rate %
1) High (superior, rich ones, rich bosses)	297	91	30,64	199	68	34,17
2) Middle	297	4	1,35	199	3	1,51
3) Government representatives	297	1	0,33	199	-	-
4) Industrials	297	1	0,33	199	-	-
5) Incoherent answers	297	17	5,72	199	18	9,05
6) Did not answer	297	183	61,61	199	110	55,27

\* Source:- Author's survey.

Both farmers and the rural laborers mentioned having noticed the existence of domination groups; percentually the 35,68% and 33,87% rates were explicit enough to locate the manners of exploration. The legitimacy of comparison between owners and non-owners reveals the interest of a class and not exactly a class consciousness ending up in a fight, because 30,64% of the total of those who own land are deriving greater advantage like that of the "rich" while 34,17% of those who do not own land state the same as can be seen in table nº 21. Within the owners group discrimination becomes even more specific since "deputados" (lowe house representatives) and "industrialists" would be taking advantage. On the other hand the different rural groups are explicit enough in pointing out the nature of the advantage, which is a result of the economical situation and not of an ostensive exploration as one could think at first sight. The data on table number 22 are self explanatory and they will save extending this interpretation too long.

The location of the social classes in the place where the rural workers live and its self-classification within such social classes make up two subjective indicators which have meaning in order to test the influence and intensity of spreading motivations originating from industrialisation. One gathers that the climax of inquiries hits hard on the manner middle class crystallises .

TABLE NO 22  
KINDS OF ADVANTAGES THAT PRIVILEGED CLASSES ARE  
DERIVING, ACCORDING TO RURAL PEOPLES, 1971\*

ADVANTAGES	Owners				Non owners			TOTALS	
	Small farmers	Farmers	Orchard growers	Laborer	Cropshare or Leaser	Adminis trator or Mana ger	Other Rural wor - kers	Nº	%
Economical, money, riches	11,30	6,00	15,71	18,66	32,69	9,37	17,50	75	15,12
All advantages	6,21	8,00	14,28	9,33	11,53	3,12	7,50	42	8,46
Better living conditions	2,26	2,00	2,86	-	-	3,12	2,50	9	1,81
They get what they want	2,26	4,00	1,43	-	1,92	-	2,50	9	1,81
They live better	1,13	2,00	1,43	-	1,92	-	2,50	6	1,21
They're on top	0,56	2,00	4,28	4,00	1,92	-	-	9	1,81
They have farms, property	0,56	-	-	-	-	-	-	1	0,20
Did not answer	75,70	76,00	60,00	68,00	50,00	84,37	67,50	345	69,55
TOTALS	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00
% Freq.	(177)	(50)	(70)	(75)	(52)	(32)	(40)	496	

\* Source:- Author's survey.

The total of the rural people who have a clear notion about social classes comes to barely 50% of the total existing in the region, as shown in table number 23. On its turn, self classification in a general way showed that 3,85% were located in the high class; 42,14% in the middle class, with the figure dropping to 43,14% for those who were not included within a given social class. Of those who are included in the upper class , 2,82% correspond respectively to small farmers, 24,00% farmers, 1,92% leasers and .... 1,42% orchard growers. Practically the stratum of the middle class is the location of all rural occupational groups, with the same happening at the level of the lower class stratum, in which some farmers and small farmers are located. The rise of the rural middle class is eminently a phenomenon which shows the breaching of the traditional systems of social classes and in which it was unexistent; This rupture is owed to industrialisation's palpable phenomenon, thus leading the rural population to a greater oc -

cupational differentiation, at the same time that the rural elites had to transfer their social executive roles to administrators and technicians, including those in university level, to take over the enterprise management. The farmers and small farmers who were not stricken by this necessity to reformulate their social roles practically went on struggling within the option of keeping the systems and traditional values. However there are few of these individuals, and even these rural people in face of industrialisation's competitive process will be forced to change, because, as the days drift by, traditionalism's last resistances will fall.

TABLE NO 23  
EXISTING SOCIAL CLASSES IN AREA, ACCORDING TO TESTIMONY  
FROM RURAL PEOPLE, 1971\*

SOCIAL CLASSES	Small Far- mers	Far- mers	Orchard grow- ers	Labor- er	Crop- sharer or Lea- ser	Adminis- trator or Mana- ger	Other Rural Workers	TOTAL Nº	%
	%	%	%	%	%	%	%		
Three classes	11,30	22,00	10,00	9,33	23,07	6,25	17,50	66	13,30
Two classes:									
Rich and poor	5,08	6,00	17,14	8,00	1,92	3,12	17,50	39	7,86
Poor and middle	9,60	12,00	2,86	1,33	11,54	6,25	2,50	35	7,05
Rich and middle	2,82	6,00	2,86	2,66	1,92	9,37	2,50	17	3,42
One class:									
Middle	10,17	6,00	17,14	10,66	5,77	6,25	5,01	47	9,47
Poor	1,69	6,00	1,43	4,00	7,69	3,12	-	15	3,02
Four classes	1,69	2,00	2,86	1,33	-	6,25	-	9	1,81
There is no class	0,56	-	-	1,33	1,92	-	2,50	4	0,80
Does not know or did not answer	57,06	40,00	45,71	61,33	46,15	62,50	52,50	264	53,23
TOTALS	%	100,00	100,00	100,00	100,00	100,00	100,00		100,00
	Freq.	(177)	(50)	(75)	(70)	(52)	(32)	(40)	496

\* Source:- Surveyor's data.

The rural middle class cannot be considered as a segment of marginal stratification, since their productive social roles are integrated in the farming economical structure. Routinization of the skilled farm worker who commutes to the factory and back home, or the engineer, technician, as well as the real estate agent creates a separation, including that of defining rural middle class having a double value character, because he belongs to the city and the country simultaneously. Perhaps this kind of middle class is in a free growth if compared to the exclusively rural middle class. This last one finds support in the standards and values intimately associated with the country, or more specifically with agriculture. As this region's farming requires, due to its very competition with industry, conditions and techni-



ques to make a symbiosis possible, the drafted individuals such as administrators, small farmers, technicians and specialists, present themselves as representatives of the new rural middle class.

TABLE Nº 24

SOCIAL CLASSES FARM WORKERS BELONG TO, 1971\*

CLASS	Small Far- mers	Far- mers	Orchard growers	Labor rer	Crop- sharer or lea- ser	Adminis- trator and ma- nager	Other Rural Workers	TOTAL Nº	%
	%	%	%	%	%	%	%		
High	2,82	24,00	1,42	-	1,92	-	-	19	3,83
Medium high	5,65	14,00	10,00	-	3,84	-	-	26	5,24
Medium middle	23,73	36,00	28,57	4,00	36,54	-	20,00	110	22,18
Medium low	12,99	4,00	17,14	20,00	17,31	12,50	20,00	73	14,72
Lower high	-	-	1,42	1,33	-	-	-	2	0,40
Does not know no information	49,72	20,00	32,85	57,33	25,00	68,75	37,50	214	43,14
TOTALS	%	100,00	100,00	100,00	100,00	100,00	100,00		100,00
Freq .		(177)	(50)	(75)	(70)	(52)	(32)	(40)	496

\* Source:- Surveyor's data.

To what extent do the region's classes define themselves whether or not starting from a marked deviation from Brazil's social stratification? Considering the Brazilian social piramide, made up of high class (4,00%) (although this data is not considered as representative), 26% occupied by the middle class (superior middle 2,00%, medium middle 6% and inferior middle 18%) and 70% by the inferior class (26:p.87). There is a tendency to change the panorama in the region with the upper class made up by 3,83%, the middle class by 43,95% and the lower represented by 53,22%. It is warned that middle class considerable increases with the resulting decrease of middle class, with the upper class remaining somewhat constant. This is evident and tends to prove the theory of social mobility of Lipset and Zetterberg, when they say that for each rising (ascending) motion there is a down (descending) motion (27:p.162).

The social estratification represents most of the time what one could call fixations or social projections (28:p.39), frequently resulting from ideological, economical ethnic and even juridical factors, in this case, is it fit to ask if the rise of the rural middle class in the region, as a consequence of a competitive process between industry and agriculture, was followed by what kind of ideological conotation? For such, if you consider three scales to deepen even more the interviewee's perception, like those used by Germani in the Buenos Ai -

res survey (29: ). The first one consubstantiated in the oral stereotypes supposedly more common, leans toward a prestige scale. The second one directed toward the economical condition and the third one tied to the ideological connotation.

By correlating the spontaneous self-affiliation of class to the economical scale, one can notice the existence of a high rate  $r = 0,94$  (a product-moment coefficient drawn by the Pearson-Bravais formula).

<u>Economical Scale</u>		<u>Self Classification</u>	
Wealthy people	19	Upper class	19
Modest people	292	Middle class	209
Unprotected people	25	Lower class	54

An even higher rate was revealed by the correlation between self-affiliation and prestige scale, amounting to an  $r = 0,98$  coefficient.

<u>Self Classification</u>		<u>Prestige Scale</u>	
Upper class	19	Superior class	18
Middle class	209	Middle class	173
Lower class	54	Inferior class	79

Quite different was the correlation between self classification and the scale of ideological connotation, due to the existence of an  $r = 0,53$  correlation coefficient.

<u>Self Classification</u>		<u>Scale of Ideological Connotation</u>	
Upper class	19	Aristocracy	9
Middle class	209	Bourgeois	71
Lower class	54	Proletariat	82

On their turn the correlation between Economical Scale and the Prestige Scale, was  $r = 0,88$ ; the economical and ideological was  $r = 0,31$  which clearly demonstrates that in the building up of the rural middle class the influences of ideological connotation which accompany modernization and industrialisation's trends are not strong enough to show a possible cleavage between "oppressors" and "oppressed" which would lead to a class clashing. The rise of the rural middle class, inclusively, made the tensions between "high bourgeois" and "proletariat" less evident.

## 12. CHANGE OF THE RURAL WORKER'S SOCIAL VALUES

Although social values make up intangible indicators, they show a sufficient cristalisation or standardization in order to become behavior's rethor trends; hence the values witnessed in the under developed rural area, by the ancestors, are to be considered as appropriate, fair, good and functional for the new generations. This does seem to occur in the Campinas Region, because the alternative goals transferred by means of mass communication from the cities, are creating and multiplying urban expectations in the rural population. The evaluation of value changes becomes complex because it pressupposes computing them at

least in three different generalisations, which would indeed be self explanatory, however, due to this work's limitations, only the family chiefs' values will be computed in view of the different options of the aims.

The rural worker is self appreciation of the situation in which he was five years ago, (1965) can be explanatory. For such, a five-item, Likert-type scale was used, and that, for comparative effects is associated with the answers by group of owners and not owners alone.

TABLE Nº 25  
RETROSPECTIVE PERCEPTION OF RURAL WORKERS ABOUT THEIR  
PAST SITUATION, 1971 \*

Thinks the was much better or much worse five years ago	PROPRIETORS			NON PROPRIETORS			TOTAL AVERA GE
	nº of answers	Affirm. answer	Rate %	nº of answers	Affirm. answer	Rate %	
1. Much better	297	14	4,71	199	3	1,50	3,42
2. Better	297	31	10,44	199	28	14,07	11,89
3. No better no worse	297	96	32,32	199	70	35,17	33,46
4. Worse	297	109	36,70	199	58	29,14	33,66
5. Much worse	297	41	13,80	199	39	19,50	16,12
6. No inf	297	6	2,02	199	1	0,50	1,41

\* Source:- Survey data.

The evaluation of the situation on the part of the rural worker, consist in computing a series of factors, placing the ten prevailing social values in evidence. Thus, 3,42% of the total sample indicated that he found himself "much better" than now, mostly among farmers, small farmers and orchard growers, and this because according to testimonies "they had everything", "prices secured were higher", "his situation was very good", 11,89% stated having a "better" situation because the "occasion was better for the farm", "things were easier". For 33,46% the situation was neither better nor worse because "they had always had the same things", "the situation is the same, nothing has changed". Those who stated their situation as worse amounted to 33,66% of the total sample; the noxious situation they were in was explained taking into consideration that "the financial situation was bad", "because of debts", or because they "did not have a fixed job", "poor production", "did not own land", "depended on others", "formerly there were worse conditions", "the soil yielded less", "used to work on the field", and so on, with other explanations. Finally 16,12% explained that they thought "the situation to be much worse" because "disorganisation was spread throughout the field" and there existed "an outrageous protectionism", or even because they "earned too little" and "farming was abandoned". Whatever the causal

factors to evaluate the situation, it was demonstrated that a great majority was, at least, in a comparatively negative situation to the one which they have at the time, as nearly 50% recognised their limitations. It is admissible that the social change is preceded by a disorganisation process, consequently before industrialisation changed the rural worker's values, it had to undermine them, by producing a instability before such values were institutionalised as a system to penetrate their farm worker is personality and motivate a push sufficient for economical production (17:p.151) The proof is found in the projection of "goals" since in a near future, that is (1976), five years from now, a great majority (56,85%) think that they will find themselves in a much better situation than the present one. This figure tends to rise if one considers the 19,55% of those who think their situation will be "much better". The explanation for this optimistic perception lies in the fact that many believe "in the ten-year plan scheduled by the government", "by the government's action", in the opportunity of "good harvests" "in the longing for life improvement", "better business" in the possibility of "investing more money", "in the country's development", "in social progress", "in technical development", "in securing better prices for coffee" "on the fact that their sons work for a factory", "one earns more in industry", "a good job, a good placement in industry" and so on. At least four alternatives are visible in the rural people's goals, as regards the fact that they expect a better situation which can be summed up as follows: 1) the one originating from government intervention; 2) of agriculture's success; 3) personal initiatives and 4) opportunities created by industrialisation. The aims that lead to pessimism though shared by the minority of the farm workers have a meaning due to being attributed to "high taxes" or by the fact that "he was older", or because "he works for a living alone", or even because "he owns very little land", "rust and pests in his crops". The reasons above mentioned are also considered responsible.

TABLE Nº 26

FARM PEOPLE'S PROJECTIVE AWARENESS AS TO THEIR FUTURE SITUATION, 1971 \*

	Owners			Non owners			TOTAL	
	Nº of answer	Affirm. answer	Rate %	Nº of answer	Affirm. answer	Rate %	Nº	%
1. Much better	297	55	18,52	199	42	21,11	97	19,55
2. Better	297	173	58,25	199	109	54,77	282	56,85
3. Equal	297	39	13,13	199	30	15,07	69	13,91
4. Worse	297	7	2,36	199	7	3,52	14	2,82
5. Much worse	297	4	1,35	199	1	0,50	5	1,00
6. Does not know no information	297	19	6,39	199	10	5,03	29	5,83

\* Source:- Surveyor's data.

In case things continue as they are, the farm hand will concentrate his vision in future opportunities to improve his situation (46,57%) whereas 22,78% emphasized they will have many opportunities. Relatively, the volume of those who said they will have few opportunities and no opportunity reaches... 15,22% and 7,86% respectively. Described along the line of owners and non owners groups the rate for the former rises considerably to 72,05%, while in the non owners groups their hopes drop to 61,32% but in spite of that, trust in the future is positive in both groups, considering that in value renewal, they do not produce with the greater tensions and conflicts that could undermine the farm hand's trust in the future.

The optimistic insight into the future of this region's rural people finds support in the fact that the system of values introduced with modernisation was at least assimilated through a process of institutionalisation by means of a progressive promotion, by undermining the resistance of the eminently agricultural, regional, old tradition. The proofs that the situation shows can be seen; first, through the farmer's physical contact with the factories spread throughout the rural environment, second by the activities performed due to these factories; third, due to consumer's involvement; fourth, due to appreciation of industrialisation's consequences, the last items specially will lead to a confrontation and examination of rural man's values.

TABLE Nº 27  
FARM PEOPLES' PROJECTIVE AWARENESS AS TO THEIR  
SITUATION IF THINGS CONTINUE AS THEY ARE, 1971\*

	Owners			Non owners			TOTAL	
	Nº of answer	Affirm. answer	Rate %	Nº of answer	Affirm. answer	Rate %	nº	%
1. Many opportunities	297	71	23,90	199	42	21,10	113	22,78
2. Some opportunities	297	143	48,15	199	88	44,22	231	46,57
3. Few opportunities	297	38	12,79	199	39	19,60	77	15,52
4. No opportunities	297	18	6,06	199	21	10,55	39	7,86
No data and no inform.	297	27	9,09	199	9	4,52	36	7,26

\* Source:- Surveyor's data.

The physical presence of factories in the rural midst, does indirectly exercise a certain kind of attraction to the peasant's expectations which will unleash flows of questions, and places him unconsciously in a defensive attitude, and this in the first contact he makes. When farm people were inquired, they.... (65,32%) spoke about the existence of factories in the area, while 23,94% denied such a presence, 7,46% did not know and 3,22% were not sufficiently explicit.

Separated in groups, the owners pointed out a smaller number of statements about the existence of a factory near his property, whereas landless farm workers... (66,33%) indicated the presence of factories near their work place. The physical presence unleash certain motivational expectations on the rural people in order to secure new roles and these roles are not always secured due to their being bashful people because of the rural laborer's professional status.

TABLE Nº 28

EXISTENCE OF FACTORIES NEAR PLACE WHERE FARM PEOPLE LIVE, 1971\*

ANSWERS	Owners			Non owners			TOTAL AVERAGE
	Nº of answers	Affirm. answers	Rate %	Nº of answers	Affirm. answers	Rate %	
Yes	297	192	64,64	199	132	66,33	65,32
NO	297	76	25,59	199	42	21,61	23,99
Does not know or did not answer	297	29	9,76	199	24	12,06	10,68

\* Source:- Surveyor's data.

Naturally the rise of new values as well as the conflict or the rural person's own values in face of industrialisation will be understood considering the attitudes they display in view of such a process. Thus, for example, the great majority (45,36%) understand that the factory is bringing benefits to the area, while 13,31% present restrictions, in that such industries "are not benefiting". What is symptomatic is that the great mass (15,72%) practically do not know whether they are benefiting with their presence in the region. One implies that such indecision will account for the lack of a proper personal value toward capturing some promotional interests.

TABLE Nº 29

RURAL PEOPLES OPINION ABOUT ROLE OF FACTORIES IN AREA, 1971\*

Are or aren't factories benefiting area?	Owners			Non owners			TOTAL %
	Nº of in terviews	Affirm. answers	Rate %	Nº of in terviews	Affirm. answers	Rate %	
Yes	297	148	49,83	199	77	38,69	45,36
No	297	38	12,79	199	28	14,07	13,31
Does not know	297	38	12,79	199	40	20,10	15,72
Other answer	297	23	7,74	199	18	9,04	8,26
No data	297	50	16,83	199	36	18,09	17,34

\* Source:- Surveyor's data.



Among those who said factories are bringing benefits, the explanations are based in the "work opportunities" they provide, in the "increase of land value" "in bettering life standards", "increasing county income", "construction of good roads", and so on. The farmers, also stress the support they have been getting with the construction of factories in the area. Those who present restrictions to the factories do so because they see their interest directly threatened as a result of industry's competitive process, which forces him to a certain kind of rationalisation; thus, many of them stated that "factories are not bringing benefits because they are luring farm hands away", "it produces things that are not worth much", "it lures good employees away from the farm" "harms the farm". In a certain way the social values tend to go into crisis, thus causing maladjustments in these farm people's personality and requiring a reformulation of its eminently agro-rural values. When described in owners and non owners groups the differences are not so substantial as shown in table nº 29.

Another perspective to locate the rural man in a radical involvement process of industrialisation is by inquiring into his role as a consumer. It is known that the consumer's values of the traditional rural man are aimed exclusively at those commodities that they produce themselves and casually primary manufactured goods. In the case of the farmer in the Campinas rural region the situation is different, because, besides many farm workers participating in industrial life, 15,52% inclusive use industrialised products from the area itself. Chemicals, fertilizers, animal feed, remedies, and farm machinery are the items most commonly purchased by the farm people. It is obvious that this change of behaviour among the country man will account for a change of values; each manufactured product demands, for its consumption, a psychological re-definition for the correct usage of said product, specially when dealing with motorised farm machinery. At the São Francisco Valley, for example, the author could notice around 1959, that jeep drivers who did taxi transportation work between Petrolina and Juazeiro da Baía, used to drive their vehicles as though they were galloping on horse back, and that was due to the psychological image about the care of riding horses which was still in these drivers' minds. The change of behavior implies a pre-establishment of pertinent values so as to re-define or replace the rural man's former values. It remains to ask, then, which channels in the Campinas area lead the rural man to change his values. Undeniably the means are many and varied, but three predominant systems must be stressed: 1) An empirical condition, taken from the rural man's own experience; 2) in the form of intellectual rationalisation; 3) conflict of values. A first one, implies a direct experience of the rural man in industrial works such as laborers, managers, accountants, watchman, mason, mechanics, operators, truck-driver helper, apprentices and so on. The second one implies an intelec-

tual conditioning which he acquired with his formal education. Many of them, upon obtaining their university diplomas, in spite their rural origin, started work as chemists, engineers or even took the initiative of setting up their own candle or soap factories, etc. so they could exploit their properties later on. Thus the latter's social values as well as the former's who changed their former attitudes and sentiments, do share definitions coherent with modern industrial life, and they amount to 14,91% to the whole. The great majority of rural people (85,09%) who had few city opportunities, have to meet their redefinition of value in a more dramatic way, in face of industrialisation's demands.

Still within this line of value analysis, another question related to the rural man's perception has to do with rural industrialisation's own consequences. According to 50,06% of these rural people, rural industrialisation could quickly bring about a slow down in the rural exodus because "everyone would work on the field", "a greater work chance in one's own area", "the farm worker would stay on the field", "he would not have to move in order to have a better life", "better salaries", "would strengthen farming". In short, the answers show what kinds of motivations a factory produces in the rural setting as it has already been happening. The variable proof for computing these answers was extracted from analysing what the farm people think about the reasons why country folks move into the city; 40,77% consider it for "better living opportunities"; 19,35% "better economical conditions", 2,62% "better social conditions" and 10,08% the three cases indicated above. There really is great coherence in the answers, since it is considered that 6,65% of the informants pointed out that rural industrialisation will be able to increase spacial mobility not only from the field towards the city but from the city out into the field as well; but for 9,07% despite industrialisation of the field being a reality, immigration into the city will tend to continue, whereas 33% do not know exactly what will happen.

In the analysis of changes in the rural man's values, it becomes pertinent to examine what is happening within the family, this, however, would require increasing the subject which would then escape the survey's limitations. However, one cannot avoid explaining the fact that the rural man's attachment to the family's traditional ideology tends to persist in a smaller proportion than those who had to adjust to change conditions imposed by industrialisation. In these latter values, peripheral values are observed when traditional values have been secularized by modernism in an ancomplete manner. The proof of change in family values becomes evident in the planning the family parents make as regards their children; 50% think that their children "will have a much better life than the parents". Within this scale of values 30% realise their children will have a better life and 6,25% think it will be identical to theirs; a mere 5,04% think that their children "will have a worse life; 7,65% did not give an opinion because they either have no children or they did not know (6,65%).

TABLE Nº 30

RURAL PEOPLES PROJECTIVE EVALUATION ABOUT  
THEIR CHILDREN'S FUTURE, 1971 \*

	Small far- mers	Far- mers	Orchard growers	Labo- rer	Crop- sharer or lea- ser	Adminis- trator or mana- ger	Other Rural wor- kers	TOTAL Nº	%
Much better	48,02	54,00	50,66	52,86	51,92	37,50	55,00	248	50,00
Better	34,46	16,00	34,66	22,86	19,30	53,12	27,50	149	30,00
Neither better nor worse	8,47	10,00	6,66	4,28	3,85	3,12	-	31	6,25
Worse	1,13	2,00	-	1,42	-	-	2,50	5	1,00
Much worse	-	-	-	-	-	-	-	-	-
Has no children	2,26	10,00	4,00	4,28	11,53	-	10,00	25	5,04
Does not know	5,65	8,00	4,00	14,28	13,46	6,24	2,50	38	7,65
TOTALS	% 100,00	100,00	100,00	100,00	100,00	100,00	100,00	496	100,00
	Freq. (177)	(50)	(75)	(70)	(52)	(32)	(40)		

\* Source:- Surveyor's data.

The reasons the country folks present as to their children eventually having a better life and a much better one (they make up 80,04%) is traced from the following values: the tooling for the preparation of their children through study whose value was not enough for the great majority, ("they are studying", "I want them to study", "they have possibilities of studying", etc.); or through the economical means which make industrial society possible, ("I started from scratch", "I want my children to be rich", "they will receive an inheritance", "they already have an economic basis"), or through the technological growth spread throughout the area, "They have more technical skill now", "I want them to go to industry", "it is possible to produce more now than before"); or because they are included in the progress of the area and the country; ("the country is progressing", "they will suffer less with development", "there are greater and better conditons"). The above appreciation demonstrates that both owners and non owners and the several rural occupational groups have identical proportions in the projective evaluation of their children's future which leads us to conclude how advanced the change process of the rural person's social values is under the influence unleashed by industrialisation.

## CONCLUSIONS

1. On the basis of social contacts, the first hypothesis that industrialisation tends to increase considerably the secondary social contacts of the Campinas region rural people, was, on a certain way, valid. The contrast that occurs between the physical contacts with the focus of regional influence makes the sustaining of such hypothesis possible, as compared with the influence of the São Paulo and Rio de Janeiro (Guanabara) metropolises and the contry capital, Brasília.

The social contacts imposed by family relationship, friendship and best man, allow the continuity of the social group as a rural people's microcosmic entity; under the influence of industrialisation this structure does not tend to collapse in the rural midst as it happens in the process of urban growth, only the frequency of contacts is transferred from the family group to the friendship groups when people are far from relatives, as it happens among the rural workers who have been attracted into this area.

The search for some institutional services such as going to church, movies, medical consultation, dentist, attending to financial duties in banks and their relation with the Agronomical Institute, permitted to check the hypothesis more emphatically, since the contact with such services imposes relations of secondary contacts which become evident, although not ostensive ones. This area of the social relationship also serves as a basis to verify the validity of the second hypothesis, specially those with the Agronomical Institute, banks, cinema, dentist, and physicians are natives of the area, the same occuring with less frequency to outsiders in the area. It can be inferred that the native rural people have assimilated industrialisation's influence more deeply than national migrants, and this is quite understandable since socialisation processes canalizes such an influence.

2. On the level of manss communication and associativism the following hypothesis is fully verified: the presence of means of communication denotes a higher level of industrialisation impact on the traditional rural society. This underwent an opening from industrialisation's effects, not only through propagation, the listening audience that the programs have, but also because of its latent communication effects both from TV and radio, implicit in advertising, which tend to arouse a desire for industrialised products among rural people. The simple fact that 86,28% of the rural population receiving news by means of radio and TV, is a proof in itself. On the other hand, the simple fact that the TV programs are prepared preferably for an exclusively urban audience, although the radio presents some "hill billy" musical programs, country folks tend to receive the spread of new ideas in identical proportions as those in the urban area, as well as ideas, habits and techniques; however their assimilation, is a result of the structural differences prevailing in the rural area, hence the "farmers" boast an intellectual resource that allows them to gather more pragmatic information from books (2,0%), newspapers (39,0%), technicians (2,0%), radio (8,0%), than from neighbors (0%). There are other groups who are aware of information from neighbors, with the exception of the laborers who originate from other parts of the country, or because they are isolated from any neighborhood. With this information one will agree with the validity of the fourth hypothesis.

3. In the Campinas Region the rural population exposed to the influence of industrialisation and modernisation presents higher educational levels. The fifth and sixth hypothesis can thus be proved. By listening to occupational groups it became evident that the farmers alone do not present any rate of illiteracy (table nº 7) whereas it is present in other groups, with this rate being quite high among rural laborers (5%), cropsharers (46,87%), laborers (32%); by polarizing to this situation the groups who attain a complete university level, corresponding to farmers (36%), small farmers (5,%), orchard growers (8,57%). and farm administraors (3,84%). The living contact of farmers, orchard growers and small farmers with industrialisation is more evident, for instance than with cropsharers and laborers, which means that industrialisation demands a sharp educational background from its workers, although this demand is not seen among consumers of its products when second-



ry needs are aroused unconsciously. Any way, the educational levels do reveal that industrialisation has sculptured or has found a sufficient educational basis for its expansion. Too, a reversible causal relation is presented in this context, for as industrialisation increases, so does the interest for a higher educational level; and as interest for education increases, so does the degree of acceptance of industrialisation. The parents' aspirations as regards their children's educational and professional level are too self explanatory, because they do not only assume a liberal ideology of free choice and not of transfer of their frustrations, as happens in the underdeveloped communities not exposed to industrialisation.

4. Upon verifying the seventh hypothesis, there was, first, a subdivision into various sub-hypothesis which were considered implicitly, and in a certain way all of them were confirmed and supported, starting with the very origin of the rural property, which, under the influence of the property became more commercialised and less proprietary. The work in the rural environment is, on its turn, more rationalised, aiming at an optimum yield, as has been found out in the progressive decline of the "partnership" system and in the economic importance of soil exploitation through intensive farming processes, on the advantages that soil analysis provides, artificial irrigation, refertilization, the use of motorised farm machinery, soil conservation, use of correctives, surface fertilizers, defensives, herbicides, all of this due to the farming technology introduced, along with the means provided by industrialisation. Notwithstanding that, industrial production has outdone agricultural yield as shown by statistical data.

To understand the influence indicated in the area, the analysis of the industrialisation process has proved that the orientation of foreign, national and domestic capital cooperated toward rising such an impact, with which, the region's leadership secured, a change of mentality as well, as proved by the behavior of a considerable number of farm people. The incorporation of organisational factors in the State Government's agencies through research institutions and county agents has contributed not only as an industrialisation reinforcement, but, most of all, as a foundation for the very agrarian industrialisation.

An evident consequence of industrialisation in the region is the increase in sharing the work, both in industry and in agriculture, getting to a high specialisation level as well. The farmers boast specialists or professionals provenient from the urban area or at least less able in university institutions, who change into agents of social change and modernisation. Thus, the eighth, ninth and tenth hypothesis were valid, while the validity of the eleventh and twelfth were considered on the same level of changes in social values.

5. The home appliance equipment proved to be an objective indicator in the area in order to show the high degree of influence in industrialisation. However, upon their being computed in terms of social-economical differences they became more evident. Therefore, the tenth hypothesis was considered as valid as a result of the empirical data gathered in the region. The fact that the rural population has modern home appliance equipments must also be understood due to the high purchasing power of the rural man.
6. The kind of abode, its maintenance in the region, place the highest sanitation standards of S. Paulo State in evidence, and it should be added that the sanitation services tend to be more and more accurate as a result of industrialisation.
7. Notwithstanding the very limitations of the analysis of the sixteenth hypothesis it was discovered that environmental pollution in the area can be a dangerous result of industrialisation.
8. The sixteenth and seventeenth hypothesis were sufficiently confirmed, in that industrialisation creates deep changes in the class structure in the rural so

ciety. Hence the presence of a new rural social class to be confirmed. The rise of the rural middle class, present two stresses in the region: 1) One with a double feature quality because it is a class that shares both urban and rural values, because many of its components are from the city or area rural people who immigrated into the city in search of university education or professional knowledge; 2) the other with an eminently rural character, this middle class is a result of an evolutionary process due to industrialisation's effects which have increased the value of small, medium and large sized properties in the area.

The general examination of social class structures in the area through the rural man's concerns, understanding of those classes, identification, wondering about classes that are taking some advantages, kind of advantage and inquiries in order to penetrate the very conscience of the rural man and his self-affiliation within a class, as well as his standing in the economical, social and ideological scales, have felled possible tension areas which would start the often mentioned class fight.

9. Finally, the arguments surveyed, though explanatory, were not sufficient to prove completely the last hypothesis about the change of the rural man's social values under the impact of industrialisation. It should deserve a greater probing into the several areas of the rural man's life which are eminently conducted by social values.



BIBLIOGRAPHY AND NOTES

1. Wilkining, E. A. "Some Perspectives on Change in Rural Societies" Rural Sociology. Vol. 20 (March, 1964), nº 1, pp. 1-17.
2. Trujillo Ferrari, Alfonso, "Implicaciones del Diagnóstico Sociológico para el Estudio de las Transformaciones de las Sociedades Agrarias", Boletín Uruguayo de Sociología. Montevideo, Vol. V. (Oct. 1965), nº 8, pp. 34-61.
3. Wagley, Charles "Estudos de Comunidade no Brasil sob Perspectiva Nacional" Sociologia. São Paulo, Vol. XVI (junho, 1954) nº 2 pp 3-35.
4. Freitas Marcondes, J. V., "Agricultura em Tempo Parcial no Estado de São Paulo e a Industrialização" Sociologia. Vol. XXIV (março 1962), nº 1, pp.29-39.
5. Molina Filho, José, "Absentismo e Agricultura em Tempo Parcial no Município de Rio das Pedras" Sociologia Vol XXV (setembro 1963), nº 3, pp. 213-232 .
6. Levy, Herbert, "A Vida Rural Paulista" in J. V. Freitas Marcondes e Osmar Pimentel, São Paulo; Espírito, Povo e Instituições. São Paulo, Livraria Pioneira Editôra, 1968, pp. 279-295.
7. Candido, Antonio. Os Parceiros do Rio Bonito. São Paulo, Livraria Duas Cidades, 1971 (2da Ed.).
8. Hutchinson, Harry W, "Comunidades e Fazendas", Sociologia. Vol. XX (maio ... 1958), nº 2, pp. 204-221.
9. SERETTE, Plano Integrado de Desenvolvimento do Município de Campinas, Campinas, 1971.
10. Coelho de Souza Keller, Elza "As funções Regionais e a Zona de Influência de Campinas", Revista Brasileira de Geografia, Rio de Janeiro, Ano 31, .... (abril-junho, 1969), nº 2, pp.3-39.
11. Lundberg, George, Schrag, Clarence C. and Larsen, Otto N., Sociology, New York, Harper & Row Publishers, third Edition, 1954.
12. Miller, Delbert C., y Form, William H., Sociologia Industrial, Madrid, Ediciones Rialp S.A., 1969.
13. Leonard, Olen E., e Clifford, Roy A. A Sociologia Rural para os programas de Ação. São Paulo. Livraria Pioneira Editôra, 1971.
14. Trujillo Ferrari, Alfonso, A Research Report in Illiteracy in Campinas. Campinas, IPPACC (Instituto de Planejamento, Pesquisa e Assessoramento nas Ciências do Comportamento), 1970.
15. Kuperman, Franklin, "Análise da Situação do Ensino Superior na Geo-região educacional de Campinas", Revista da Universidade Católica de Campinas. Vol. 14 (junho 1970), nº 33, pp. 191-218.
16. Marshall, A Principles of economics (8ª Ed.) Londres, Macmillian, 1930.
17. Parsons, Talcott, Estructura y Proceso en las Sociedades Modernas. Madrid, Instituto de Estudios Políticos, 19566.
18. "Diário do Povo", Campinas. Edição Comemorativa 1972
19. Oberg, Kalervo "O Campônio Marginal no Brasil" Sociologia, Vol. XIX (maio 1957), nº 2, pp. 118-132.

20. Centro Interamericano de Vivenda y Planeamiento, Experiencias sobre Vivienda Rural en el Brasil. Bogotá, Colombia, Unión Panamericana, 1961.
21. Trujillo Ferrari, Alfonso, Potengi: Encruzilhada no Vale do São Francisco. São Paulo, Editora Sociologia e Política, 1960.
22. Censo Industrial do Estado de São Paulo para 1968. São Paulo. Departamento de Estatística do Estado de São Paulo.
23. Mc Clelland, David, C. La Sociedad Ambiciosa, Madrid, Ediciones Guadarrama, 1968 - 2 vols.
24. Brandão Lopez, Juarez Rubens, Sociedade Industrial no Brasil. São Paulo, Difusão Européia do Livro, 1964.
25. Dahrendorf, Ralf, Las Clases Sociales y Su Conflicto en la Sociedad Industrial. Madrid, Ediciones Rialp, 1962.
26. Bresser Pereira, L. C., Desenvolvimento e Crise no Brasil. (1930-1967). Rio de Janeiro, Zahar Editores, 1968.
27. Lipset, Seymour Martin and Zetterberg, Hans L., "A Theory of Social Mobility". Transactions of the Third World Congress of Sociology. Vol. II, 1956, pp.... 155-177.
28. Stavenhagen, Rodolfo, Las Clases Sociales en las Sociedades Agrarias, México Siglo XXI, Editores, 1970 (2da. Ed.).
29. Germani, Gino, Clase Social Subjetiva e Indicadores Objetivos de Estratificación. Buenos Aires, Instituto de Sociologia, 1963.